Lectures
ON THE
RELATIONS OF THE TUBERCLE BACILLUS TO PHTHISIS.

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LECTURE I.
ITS PATHOLOGICAL ASPECTS.

(Concluded from p. 136.)

BEFORE giving in detail the clinical cases bearing on the bacillus, it would be well to advert to what is at present known of the part it plays in the pathology of phthisis. The able report of Mr. Watson Cheyne has shown that the success in inoculating animals, whether rodents or carnivora, depends on the bacilli contained in the material employed, the certainty of the production of tuberculosis by inoculation of tuberculous material, and the rapidity of its occurrence, being in a direct ratio to the number of bacilli present in the inoculating material, whether this is caseous gland, bovine tubercle, phthisical sputum, or bacilli growing free in serum, the two latter being by far the most efficacious agents. All these experiments, however, produce general tuberculosis, and the only disease that is exactly akin to this induced form is acute tuberculosis in man, and Mr. Cheyne considers these to be identical. But when we come to pulmonary phthisis, chronic or acute—that is, the disease beginning in the lungs,—we are met by some difficulties with regard to the bacillus, for while bacilli are found in great abundance on the linings of cavities and in caseous masses, they are not so commonly detected in other parts of the lung structure—in fibrosis, for instance. Dr. Samuel West[1] regards their presence in the sputum as a proof of excavation, and their numbers as easy means of estimating the rate at which this process is taking place in the lung. Mr. Cheyne, as an explanation of the comparative rarity of the bacillus in sections of tubercle, states that two distinct structures have been described under this title:—1. Nodules of lymphatic tissue in close proximity to the vessels and bronchi. These contain no bacilli. 2. Nodules largely made up of epithelioid cells and containing bacilli. The first he considers the result of irritation on the lymphatic tissue of the lung, the second being the seat of infection. These last consist of epithelioid and giant cells surrounded by inflammatory (lymphatic) tissue, the bacilli being found in the epithelium, and largely in the giant cells. When caseation takes place in the centre of the tubercle, the bacilli are to be found in the caseous mass, but are best seen in the still living cells. One of the chief points which Mr. Cheyne lays stress on is that the habitat of the bacillus is the alveolar epithelium and the products of its proliferation—to wit, the single nucleated and the multi-nucleated or giant cell. It is here that the bacillus settles and causes multiplication of the cells, even escaping from the circulation into the lymphatics to reach this favourite haunt. In ordinary phthisis the bacilli are supposed to reach the lung by inhalation, and to develop in the alveolar epithelium, causing its proliferation by irritation. The alveolus becomes stuffed with cells; giant ones being formed, if the process be a slow one; if quick, caseation taking place early. Infection of neighbouring alveoli proceeds partly by continuity, partly by the coughing up and re-inhalation of bacilli into other parts of the lung. The further progress depends on the rate of growth of the bacilli, and on the fitness of the soil for their development. If they multiply quickly, caseous pneumonia and rapid excavation of the lung will ensue; but if slowly, the irritation of their presence, and of the resulting caseation, may cause thickening of the alveolar wall with inflammatory tissue, and a fibrous barrier be presented to further infection, and thus the evil doing of the bacilli may be localised. This is what takes place most markedly in fibroid phthisis, where the bacilli are very rare. On the other hand, if the barrier be feeble and the lungs become largely involved, the walls of the pulmonary veins having tubercular masses in them, as Weigert and Mügge have shown, the bacilli enter the circulation and acute tuberculosis is the result. Weigert has also found that the innominate veins may be affected from the neighbouring bronchial glands, and Koch had a case, cited by Mr. Cheyne, in which the wall of an artery was involved in acute miliary tuberculosis, through spread of disease from a bronchial gland.

It must be admitted that this view of the pathology of phthisis is lucid, and, as far as the results of experiments on animals can be cited to prove the analogy with human disease, it is apparently impregnable. It explains several of the histological features of tubercle, the epithelial accumulations within the alveoli, the formation of giant cells, the exudation of fibrin and leucocytes, all these being the result of irritation from the bacilli; but it does not equally well explain the small-celled or lymphoid tissue commencing in the alveolar walls, and by its rapid growth, according to Dr. Wilson Fox, leading to obliteration of the capillaries and necrobiosis of the parts involved. The inflammatory tissue described by Mr. Cheyne differs from this in the absence of the delicate reticulum noted by Dr. Sanderson, the existence of which Mr. Cheyne appears to doubt, and instead of leading to destruction by caseation appears to resemble the part played by the interlobular growth in limiting the spread of the changes, caseation taking place only in the epithelioid elements, and not in the alveolar wall; this latter, however, eventually disappearing by pressure, and its destruction giving rise to the formation of cavities. The limited portion of the lungs attacked in early phthisis is also accounted for; for here the bacilli enter only a few alveoli; and the fact of the apices being first attacked may depend, as Dr. Green shows, on the presence of inflammatory exudations, the result of more or less injury to the pulmonary vessels through stagnation of the blood. This arises from the imperfect exercise of the upper lobes. The spread of tubercle round cavities or centres of caseation would be assigned to the bacilli entering the lymphatics of the district, and the infection of the opposite lung might arise through the lymphatics or the bloodvessels from inhalation of some of the sputum. For infection of other organs we must take it for granted that the pulmonary vessels are involved, and in this case we may have tuberculosis of the membranes of the brain, spinal cord, abdomen, as well as the liver, kidneys, &c. Infection might also take place through the lymphatic system of the bronchial glands. On this theory we may explain the limitation to the lungs of acute phthisis (caseous pneumonia), acute tuberculo-pneumonic phthisis, catarrhal phthisis, and the spread through the whole body of acute tuberculosis. The predominance of the growth of the inflammatory tissue would give us some key to the phenomena of fibroid phthisis, but to my mind it fails to explain the thoroughly constitutional features of scrofulous phthisis, nor do I quite see how the causation of the hæmorrhagic variety, characterised by small consolidations and large hæmoptyses, is brought about. Laryngeal phthisis is also a difficulty; for why, as Dr. Percy Kidd suggests, with the bacilli-laden sputum passing continually over the larynx, do we not get ulceration in all cavity cases? Another grave objection lies in the fact, that though the bacilli have been found abundantly in the walls of cavities, they have seldom been detected, and only in small numbers, in sections of human phthisical lung tissue. Even Mr. Cheyne admits this; but it may be due to so much of the epithelial element, the habitat of the bacilli, disappearing before death, either by the invasion of fibrosis or by caseation and expectoration. The bacilli have been detected in tubercle of the peritoneum, and in miliary tubercle of the lung, but always in small numbers. There is, therefore, a wide field for further pathological investigation on these points, but seeing how many difficulties in the way of accepting the bacillus theory have already been overcome, it must be admitted that there is strong probability in favour of these also being explained by the aid of improved methods of investigation. Another element which we must not overlook in the consideration of this matter, is the question of a fitting soil, and assuredly all the advocates of the bacillus fall back largely on this, for in many cases we can hardly escape the conclusion that bacilli enter the respiratory tract, and even the alveoli, and do not give rise to phthisis, which can only be explained on the ground that the constitution of the individual ren-

[1] THE LANCET, April 21st, 1883.

dered the epithelium unfit for their reception; and in truth, if we are to accept the bacillus theory at all, we must suppose that the various and well-known predisposing causes of phthisis, such as dampness of soil, bad ventilation, bad confinements, and other debilitating conditions, must act by preparing a fit soil for the bacillus either by bringing about low inflammatory conditions, which tend to cellular products, or by weakening the resisting powers of the constitution. The recognition of one exciting cause instead of many will tend to simplify the etiology of phthisis, and will lead us, it is to be hoped, not only to direct remedial measures against this latter, but equally, and perhaps more effectually, against the predisposing causes.

The tubercle bacillus is generally described as varying in length from $\frac{1}{3000}$ of an inch to $\frac{1}{1500}$, and having a breadth one-fifth of its length. As regards breadth, it is generally uniform, though I have noted some bacilli double the thickness of others, the thickest ones being invariably beaded and ready to divide. I have, therefore, concluded that these are the older rods, and that the others are of younger growth. As regards length, I find them vary greatly. Some are only twice as long as they are broad, others extend over a twelfth of the diameter of the microscopic field. In form most are straight, with somewhat rounded extremities. The bacilli are not always straight, but often have a curve, sometimes forming a portion of the arc of a circle. With reference to the varying thickness above mentioned, I am aware that this might be due to two bacilli lying on each other, as is often the case; but this can be easily detected by adjusting the focus to different parts of them. Bacilli are found singly or in groups. In the latter case they appear like bundles of sticks, numbering three, four, five—a very common position is two bacilli touching at one end, at an angle of 45°. The grouping of the bacilli generally means mischief, as it is rare to find a number of groups without distinctly advancing disease being present. Bacilli appear to multiply by division, and not uncommonly we see one long straight rod, and parallel with it a second one which is evidently in process of division—i.e., with slight spaces separating three or four segments, all lying in the same line. Often we see a third bacillus in the vicinity, still more broken up into numerous segments, these being separated by wider intervals, but the original connexion being still widened by their distribution along the same line. Even under a low power they frequently present a beaded appearance, clear spots alternating with dark germ-like bodies, the beadings varying in number according to the length of the rod. As a rule five or six are seen, sometimes a larger number, in long rods about to divide. My experience is that the beaded rods may break up into single beads, the bright spore-like bodies of Dr. S. West, which afterwards develop into fresh bacilli, and I have not always been able to recognise the surrounding membrane which Mr. Cheyne describes. In sputum containing bacilli, after being kept in a moderately warm room for ten days, I have noticed a decided increase in the number of bacilli; and when one reflects on the conditions of the air-passages, the combination of warmth and moisture always present, we can understand how multiplication and growth proceed, not only in the alveoli, but in advanced cases, probably also in the larger bronchi, where, owing to the difficulty of expectoration, large accumulations of sputum take place.

Diagnosis.—It is probable that the discovery of the bacillus will assist us more in diagnosing phthisis from other lung affections than in the treatment of the disease. Where it is most useful is in separating clearly cases of chronic pneumonia and those of dilatation of the bronchi from phthisis. We often see an instance of chronic pneumonia with extensive consolidation and well-marked crepitation at the apices of one or both lungs. The history is somewhat obscure, and often, especially if hæmoptysis be present, points to phthisis, and the physical signs rather incline us to hold that softening is taking place in an old consolidated lung. The expectoration if carefully examined and found to contain no bacilli at once settles the point. A good instance of this was a coachman, aged forty-six, whom I saw in consultation with Mr. Tweed in February, 1883. He had been a hard drinker, and had had pneumonia three years previously. A week before a fresh attack had come on, with high temperature and quick pulse. The cough was incessant, the expectoration partly frothy and partly purulent. Crepitation was audible over both lungs, and some dulness at the bases, but cavernous sounds were heard above the right clavicle, which made us both suspect that a cavity had formed in the old consolidated lung, and that the case might have become one of phthisis. Examination of the sputum, which was made more than once, failed to detect any bacilli, and we accordingly came to the conclusion that the case was one of pneumonia, in which previous attacks had given rise to dilatation of the bronchus. It must be borne in mind that had the case been one of phthisis, the bacilli would not only have been present, but in great abundance, as they usually are in cavities when a large discharge is taking place. Another instance was a gentleman, aged forty-six, whom I saw in February of this year. He had pleurisy several years ago, and for four or five years had suffered from cough and expectoration, with slight hæmoptysis. The pulse and temperature were normal. The physical signs showed crepitation over the whole right side, with some spots of coarser crepitus in the first interspace and between the fifth and sixth rib. Dulness extended over the lower half of the right front chest. He complained of great dyspnœa on exertion. Under treatment the cough moderated, but the expectoration remained yellow; there was no wasting, night sweats, or fever. Examination of the sputum showed abundant bacilli, which gradually disappeared as the symptoms diminished. Another class of cases, which are very difficult to diagnose are those of dilatation of the bronchi, following on chronic pneumonia or bronchitis. When the dilatation of the tubes occurs in the lower lobes, the physical signs and the convulsive character of the cough, as well as the fætor of the expectoration, render diagnosis easy, but when the bronchiactases are found scattered over the upper portions of the lungs, as well as in the lower, and when they give rise to cavernous breathing in the first and second interspaces, the diagnosis often becomes exceedingly difficult, and depends chiefly on very careful mapping out of the area of cavernous sounds, such as I have shown elsewhere.[2] In such cases examination of the sputum removes all doubt. The following is a good instance:—

Hannah I——, aged twenty-four, servant, was admitted March 3rd, 1883. Her father died of phthisis; one sister suffers from some chest affection. She had typhoid fever fourteen years ago, followed by scarlet fever, and has been subject to cough ever since; six years ago she had disease of the hip-joint, and became an in-patient of the London Hospital; three years ago she had hæmoptysis (one pint), and the cough has been worse ever since; she has had night sweats for twelve months, and shortness of breath lately; she has lost flesh for six months; her voice disappeared for the whole of one winter two years ago. At present her cough is incessant, and somewhat hard in character. Expectoration yellow, two to three ounces. The patient complains of pain in the left chest; tongue clean; bowels relaxed; pulse 116; respiration 16; temperature 99°. Catamenia absent seven months; aspect cachectic; weight 7 st. 13½ lb. Physical signs: On the left side dulness, crepitation to the fifth rib, posteriorly crepitation over the whole side.—15th: Her cough more troublesome; expectoration one ounce daily; her voice has disappeared; crepitation audible under the right clavicle. No bacilli could be found in the sputum.—30th: Her cough worse; crepitation less on the left side; no bacilli in sputum.—April 7th: Her cough increasing; expectoration more abundant, purulent, and decidedly fetid. The patient has herpes labialis. Dr. Kidd examined the larynx and found the vocal cords healthy, but adduction imperfect. No bacilli in sputum.—19th: Her cough somewhat better, but still bad at night, and is remarkably convulsive; expectoration has a sulphurous odour. Physical signs: On the left side the crepitation has much diminished, but tubular sounds are audible over a small area below the scapula. The sputum has been again examined, with negative result. The history of this case, especially the facts of the cough and expectoration following hip disease, pointed towards phthisis. The convulsive character of the cough and the hysterical aphonia raised doubts in my mind, which the examination of the sputum strengthened, and which were entirely confirmed by the latter becoming fetid.

Another group of cases in which the diagnosis will be materially assisted by the bacillus, is where the catarrhal symptoms mask the consumptive ones; and here specially, when there is no pyrexia present, the detection of the consolidation is often difficult. A good example of this will be later given in Lecture II., where the history pointed to asthma, though the phthisical signs made us suspect tubercular disease at one apex, which the detection of bacilli confirmed.

[2] British Medical Journal, 1881.

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I had a remarkable exemplification, the other day, of the use of this test in a case of chronic empyema, where, in spite of free drainage and absence of all fætor, the temperature chart pointed to some form of septicæmia, and I suspected at once that there was absorption of the matter and commencing tuberculosis of the opposite lung. Examination of the sputum showed a fair number of bacilli, and, about the same time, fine crepitation was detected in the first interspace on the right side, the empyema being on the left.

Cases of laryngeal phthisis at an early stage present occasional difficulties of diagnosis, partly from the mucous membrane of the larynx being swollen, and not presenting distinctive ulceration, and partly because, respiration being a painful act, the patient does not breathe sufficiently deeply to give auscultation a fair chance. Here, again the examination of the sputum helps us considerably. A gentleman, aged thirty-five, who is at present under my care, with a decidedly phthisical history, came in February with loss of voice, which he stated was only an occasional symptom, with cough and abundant expectoration, loss of flesh, and night sweats. Examination of the chest showed obscure breathing in almost every part, with fine crepitation under the right clavicle. The larynx presented a red and somewhat tumid mucous membrane, and at a later date the crepitation above mentioned passed away. The sputum was examined and found to contain abundant bacilli. About a month later crepitation was detected at the left apex, and a cavity rapidly formed, the larynx now exhibiting the characteristic features of tubercular ulceration. In this case it is true that the general evidence pointed towards phthisis, but the paucity of the physical signs and the character of the patient made me strongly suspect syphilis, which the detection of the bacilli and the after-history of the case negatived. However valuable this test is in the above classes of cases, we must never allow it to interfere with most careful physical examination of the chest, as, after all, the presence of bacilli cannot define the locality, or even the extent, of the diseased area, but can only indicate the existence of the morbid process.

ON THE

DEVELOPMENT AND COAGULATION OF THE BLOOD.

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(*Continued from p. 138.*)

On the action of neutral salts.—Certain of my critics have made much capital out of my use of a saturated solution of salt for the purposes of altering the refractive index of the liquor sanguinis and as the basis of a staining fluid; and when, as my work advanced, I found that aniline blue was a better staining agent for the colourless discs than carmine, and substituted ¾ per cent. of sodium chloride for the saturated solution, this change was fondly attributed to the pressure which had been brought to bear upon me, whereas it was due to the simple fact that the aniline blue is thrown down from its solution almost entirely in strengths of salt of over 4 per cent. I also stated at the time that I did not think, as some others have thought, that ¾ per cent. of sodium chloride by itself was an entirely satisfactory preservative. My critic now expresses surprise that I should think anyone held this view, and says, "This is certainly an error, and I do not know on what authority it is alleged." Well, I had read in Rollett's article on the Blood, in the first volume of Stricker's Histology, page 397, after a description of the action of strong solutions of common salt, Glauber's salt, sal ammoniac, &c., the following: "In dilute solutions of some of these salts, the concentration of which is about equal to that of the blood serum, the corpuscles retain their characters for some time without alteration; solutions of this kind are therefore frequently applied instead of serum for the purposes of dilution." If it is not the common salt which is here referred to, which is it? Certainly not the Glauber's salt, as I shall presently show. My critic had also in a previous onslaught, when urging the destructive characters of the saturated solution of common salt, used the following words: "This property of concentrated solution of common salt is, indeed, mentioned by Rollett in Stricker's manual, and is well known to histologists. On the other hand, dilute solutions of certain ascertained strength are known to have the power of preserving the red corpuscles unaltered." If the dilution here referred to is not the strength normal to the blood, I should be glad to learn what strength it is. Now the tide has turned again, and "a ·75 per cent. solution of salt is far from being preservative of the blood-corpuscles; it produces all kinds of deformities of the corpuscles, and when compared with sulphate of soda as a standard, it dissolves about 3 per cent.—that is to say, about 150,000 out of the 5,000,000. Now, in spite of all this, it will be well to keep in mind the fact that this is the normal proportion of this salt in the blood. On the principle of attending to the worst case first, we leave the ¾ per cent. solution for a while, and consider the validity of the objections to a saturated solution of salt, which I have used for altering the refractive index. It is stated that when a saturated solution of common salt is added to the blood, it causes about one-third of the red discs (1,660,000 out of 4,930,000) to discharge their hæmoglobin and to become transparent (colourless), and that these corpuscles, decolourised by the action of the salt, have been misinterpreted by Dr. Norris as normally existing in the blood." Again, it is stated, when it is a question of the actual existence of the invisible corpuscles, it can scarcely be considered a matter of small importance that 1,660,000 out of 4,920,000 should be artificially converted from the visible to the invisible condition by the very agent by which he seeks to demonstrate them as normal elements of the blood." I should think not. I quite agree with the author both as to the destructive influence of a saturated solution of salt, and as to the importance of not overlooking this action in connexion with the blood discs. I do not agree with the statement that I have misinterpreted these corpuscles as normally existing in the blood. I do not believe that there is scarcely a property in common between the corpuscles here talked of and those I have investigated and designated the colourless discs of the blood.

As "to eliminate all sources of error is avowedly the first step in a scientific investigation," I have endeavoured to ascertain by a process more certain than corpuscle counting[1] the actual value of the preservative power of some of these solutions—viz., by estimating by the spectroscope, and by photography, the amount of free hæmoglobin which definite quantities of them may contain, after being associated at a known temperature with definite quantities of blood for a given length of time. One cubic millimetre of blood is added to 100 cubic millimetres of each of the following saline solutions, and these are placed in six tubes of equal diameter side by side—viz., ¾ per cent., 8 per cent., and 36 per cent. solution of salt, the latter being a saturated solution; ¾ per cent., $1\frac{1}{10}$ per cent., and 5 per cent. solution of sulphate of soda. The seventh tube contains pure water, as a term of comparison. It will be found that the ¾ per cent. and the 8 per cent. solution of salt, and the $1\frac{1}{10}$ per cent. and 5 per cent. sulphate of soda, are all so free from colour that they are indistinguishable from the pure water; while the ¾ per cent. solution of sulphate of soda, and the 36 per cent. or saturated solution of salt, are deeply tinted with hæmoglobin. The curious point brought out is that the sulphate of soda becomes suddenly preservative of the blood at about $1\frac{1}{10}$ per cent, and continues to exert this power, as it is progressively strengthened, even up to 25 per cent. (saturated); while the chloride of sodium is a fair preservative at ¾ per cent., and begins to exercise a destructive effect when 10 or 15 per cent. is arrived at.

I must return now to my justification of the use of a saturated solution and of a ¾ per cent. solution of salt. Now the actual facts of the case are these:—When I run fresh blood underneath a packing glass there come into view frequently certain colourless spaces, as seen in photograph 5, the outline of which is made up of small curves, while the interior of the space looks perfectly homogeneous—that is, no outlines indicative of the presence of corpuscles can be seen in it. If now I repeat this experiment with the addition of a small portion of salt solution to the blood, the interior of the space is no longer homogeneous, but the outlines of the corpuscles lying in the space can be faintly seen.

[1] According to Dr. Gowers, if 200 corpuscles are counted, the error is 5 per cent.; if 5000, 1 per cent.—i.e., 50,000 in the cubic millimetre.

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Now the corpuscles which lie in these spaces have not been produced by the use of salt solution, because they are present without it. All the salt has done in the manner I have used it has been to show that these spaces are really full of corpuscles, by displaying their outlines as they lie in contact with each other; whereas in the experiment without the salt we had only evidence of the existence of invisible corpuscles at the periphery of the space by means of the curved outlines made in the red discs. Such, then, is the immediate result of my use of the saturated solution of salt. I do not know with certainty whether this difference is due to an alteration of the refractive index or to the prevention of the fusion of the corpuscles. What, then, is the meaning of the statement that the addition of saturated solution of salt to the blood decolourised one-third of the red discs, and that I have mistaken these for normal products of the blood?

Now, let me call attention to the utter absence of all parallelism between my experiments and these. In my paper I give the following directions[2]:—"If we place upon the tip of the finger a minute drop of saturated solution of salt, and prick through it so that the blood may flow directly into the saline solution, the refractive power of the liquor sanguinis is modified, and it is found that if we run this mixture of salt and blood between glasses prepared according to the packing method before described, we can then see the outlines of the transparent corpuscles, and the clear spaces, which have hitherto been supposed to consist of liquor sanguinis only, are observed to teem with these corpuscles, as in Plate 2, photograph 6." A minute drop of a saturated solution of salt, as I have employed it, means about one part of saturated solution of salt to four parts of blood. In such a mixture the blood discs will be subjected to the influence of about 8 per cent. of salt, because at 60° F. a saturated solution of salt is about 36 per cent., and this divided by 5 gives 7¼ per cent., and represents the increase of salt to that normally existing in the blood—viz., ¾ per cent. I have shown that the albumen dissolved in the serum exerts a great influence in preventing the exosmose of the hæmoglobin. In my experiment this protective influence is reduced one-fifth, and we get also the deteriorating influence which, increasing the watery element of the blood, one-fifth may be capable of producing. When such an amount of saturated solution of salt is added to the blood in the manner I have recommended, and rapidly mixed with it, it is reduced to about 8 per cent, and no deteriorating action in the way of losing colour is perceptible upon the red corpuscles till after a considerable lapse of time, and the invisible discs are present in the same numbers as when the salt is not used, and still require to be rendered visible by some of the mechanical methods. The only effect the salt has had, as before stated, is to render apparent the outlines of the invisible discs, where they impinge or lie in contact with each other, in the large colourless spaces.

Now, observe how all these conditions are altered in the so-called "control experiments." We are told that enumerations of the red corpuscles were made by means of Gowers' hæmacytometer and Potain's mixer. To make a numeration, a solution of blood is made in a Potain's mixer by adding one part of blood to 100, 200, 300, 400, or 500 parts of the diluent. As a rule, 200 parts of the diluent are taken; but as the amount used is not given, we will suppose the smallest quantity consistent with successful counting—viz., 100 parts—to have been taken. In my experiment the blood is greatly in excess of the salt solution, and the latter is diluted by it; but in these experiments the blood is overwhelmed with the saline solution, and the corpuscles are brought at once, and remain, under the influence, not of 8 per cent., but of 36 per cent. of sodium chloride. At the same time, the protective influence of the albumen is reduced to *nil*, and the deteriorating influence of 100 parts of water is brought to bear on one part of blood. We are told that in one experiment the mean counting gave 4,920,000 corpuscles per cubic millimetre with the five per cent. solution of sodium sulphate, and 3,260,000 with the saturated solution of sodium chloride, and that 1,660,000 had therefore been rendered invisible by the action of the sodium chloride.

Now the only value which these experiments seem to me to possess is to show that when large and equal dilutions of the blood are practised with a saturated solution of salt and a 5 per cent. solution of sulphate of sodium respectively, the latter is less destructive to the corpuscles than the former. This we might have expected *à priori*, for the one salt is present in a strength of 5 per cent. only, while the other is 36 per cent. The experiments do not help us to form any idea of the relative destructive tendencies of equal weights or percentages of these substances on the red blood-corpuscles, which is the point we require to elucidate. But what is the bearing of these experiments on my own? I have shown that the red discs are, in my case, subjected to the influence of about 8 per cent. solution of salt. There is no great difficulty in ascertaining the destructive or preservative powers of the various strengths of different saline solutions. The method of procedure is as follows:—One cubic millimetre of blood is added to 100 cubic millimetres of the solution to be tested. The corpuscles are allowed to subside, and it is then ascertained what depth or thickness of the clear supernatent liquid is required to give the blood bands of the same distinctness as a ¼ per cent. solution of blood one millimetre thick; or, if preferred, a definite known percentage of blood is diluted down till the same thickness is required to give the absorption bands as the solution to be tested. By either method we get in corpuscles the equivalent of the free hæmoglobin present. In this way we have ascertained that the 5 per cent. solution of sulphate of soda contains free hæmoglobin equal to a loss of 7000 red discs to the cubic millimetre, ¾ per cent. of sodium chloride of about 14,000, and 8 per cent. of about 21,000; hence, in blood of a corpuscular richness of 5,000,000 red discs to the cubic millimetre, the relative preservative powers of sulphate of soda and chloride of sodium will be about as follows:—

5 per cent. sulphate of soda ..... 4,993,000, loss 7000.
¾ per cent. chloride of sodium ... 4,986,000, loss 14,000.
8 per cent. ,, ,, ... 4,979,000, loss 21,000.

In these cases one cubic millimetre of blood is submitted to a prolonged action of 100 parts of the diluent.

The following statement shows briefly what occurs with saturated solution of salt as used in my experiments. If one cubic millimetre of a 36 per cent. solution of salt (saturated) be added to four cubic millimetres of blood, the saline element of the latter is raised to nearly 8 per cent. The watery element is increased and the albuminous decreased one-fifth. The destructive influence of the corpuscles is increased by the difference between ¾ per cent. and 8 per cent. of the salt and of the weakening of the protective influence of the albumen one-fifth. In the previous case the influence of the albumen, which I have shown to be very great, is reduced to *nil*, and the corpuscles are submitted to the deteriorating influence for a long period; hence nearly all the 21,000 corpuscles lost in the latter case will be preserved in the former. The remarks I have made on the 8 per cent. solution of salt apply with equal force to the ¾ per cent., which, as hitherto, must still continue to be regarded as a good and useful preservative of the blood. In conclusion, we see how thoroughly mistaken is the view that one-third, or 1,666,000 corpuscles, are lost by my method of operating. The weakness of the criticism lies in the neglect of quantity, a factor which under the designation "strength" is no more to be disregarded by the chemical physiologist than by the mathematician. But I propose to go further, and to cut the ground entirely from under my critic's feet, by affirming that a 5 per cent. solution of sulphate of soda will do equally with any of the other methods I have employed, both as the means of altering the refractive index or of showing the outlines of the corpuscles, and also as the basis of the staining fluids; for I find that it is an exceedingly good solvent of the aniline blue and of eosin very much superior to the sodium chloride, and I therefore recommend it for these purposes.

(*To be continued.*)

[2] Physiology and Pathology of the Blood, p. 4.

LONGEVITY IN ENGLAND.—The mortality returns for England in the year 1881, which have just been completed, record the death of ninety-one persons who were registered as 100 years old and upwards when they died. Of these aged persons twenty-five were men and sixty-six were women. The ages of the men are recorded as follows:—Nine were 100, five 101, three 102, one 103, two 104, three 105, one 108, and one who died at Hockham, in the Wayland district, Norfolk (if the register is to be relied upon), had attained 112 years. Of the women, twenty-four had reached 100, fifteen 101, eight 102, five 103, six 104, two 105, three 106, and three 107.

REMARKS ON ONE FORM OF LAWN TENNIS KNEE.

BY C. MANSELL MOULLIN, F.R.C.S.,
ASSISTANT-SURGEON TO THE LONDON HOSPITAL.

ALL amusements have their drawbacks, inherent and unavoidable. Concerning football, it is scarcely necessary to speak, perhaps too much has been said already; rowing, especially in scratch races, the same; riding, not to include falling off, has its riders' sprain; lawn tennis its wrist, and now I must add its knee. As in all the rest, so in this; it is not the practised player who comes to grief; most often it is he who has enjoyed a reputation in years gone by. Those who contend in university races, for which men are selected and trained with the greatest care, rarely meet with harm; college fours and scratch races of like character, perhaps only for a very short distance, for which all trained and untrained alike enter, too often work the ill for which the others get the blame. Thus it may be that, just now, at this time of year when tennis is being extensively played in suburban gardens, when the city clerk and the professional man engaged all day and for days past through the winter in some sedentary occupation suddenly indulge in an afternoon's amusement, tennis knees come prominently before our notice. At least, to say nothing of old friends whose appearance one expects regularly at the commencement of each season, I have quite recently seen several all of the same character. They do not understand how it could have happened; "it was only a twist, you know; just like that you ——," and the sentence ends unfinished, while the patient sits down abruptly on the nearest chair with a look on his face that may express anything, but not comfort.

Now there are many kinds of ill that may befall a knee as the result of tennis, but it is only with one of these that I intend to deal at present. Loose cartilages attributed to it as a cause are certainly not infrequent; nor is that condition of profusely fringed synovial membrane that often gives rise to the same sort of symptoms, and keeps working within a most vicious circle by being at once the result of past attacks and a sufficient cause for future ones; irregular sprains of all or any of the ligaments in and round the joint, and even complete displacement of a semilunar cartilage, have been recorded; while more rarely found are instances of that peculiar form of internal derangement, causing locking of the joint, described by Hey and Knott.

Mine is not quite any of these, but rather a strain of that particular portion of the internal semilunar cartilage which finds its insertion by means of a strong band of ligamentous fibres on the outer side of the inner tuberosity of the tibia, just in front of the spine, and it is always produced or capable of being produced by the same definite and characteristic movement. The player is standing with his knee slightly flexed, resting his weight on one foot—say the right—the left one touching the ground behind with the toes; suddenly he makes a twist round, bringing the left leg to the front, and while doing so either reaches as far forward as he can, or more frequently attempts to spring from the right foot. The immediate result is a fearful pain in the right knee, often causing him to fall, while at the same time his face becomes pale, and the feeling of sickness so characteristic of a sprain comes over him. The knee itself rapidly fills with fluid. In the majority of cases nothing else abnormal can be found, and though the effusion under proper treatment is readily absorbed, there is left an indefinite sensation of weakness and a tendency to refill, not only when the same movement or anything approaching it is repeated, but under any condition of slight over-exertion. There is no locking of the joint at any time, and in this it differs from both the forms of internal derangement; flexion and extension are only limited by the amount of the effusion and by the pain always felt at the attempt, and there is only one tender spot on a level with the head of the tibia, just on the inner side of the ligamentum patellæ. Sometimes one hears that immediately after the accident there was just at this spot a slight projection, which disappeared at once. One of my patients was quite clear as to this, but I have never seen it myself. Later on, after several attacks, the knee loses its natural shape, and assumes the well-known appearance always left by repeated attacks of synovitis, with washleather creaking and the rustle of synovial fringes well marked.

There is only, I believe, one way in which it is possible to explain this accident. The player's right foot is fixed by his weight and by the structure of his tennis soles, and with the foot the tibia, there being of course no rotation permissible at the ankle-joint, so that at the very instant that vigorous extension is being made at the knee-joint the whole momentum of the body, as it is twisted round with the impetus of a sudden spring, is communicated to the lower extremity, which is violently rotated round a vertical axis passing through the inner side of the external condyle of the femur, and corresponding in this position with the plane of the plumb line drawn from the centre of gravity. Thus the two condyles are carried on the tibia, the internal as far forward as the ligaments will allow it, the external to a much less degree backward.

Now this rapid and vigorous movement of the condyles on the tibia is exactly the opposite of that which takes place in normal extension of the limb. There are two kinds of rotatory movement possible between the femur and the tibia. The first is one of pronation and supination in the semi-flexed position of the limb round an axis passing through the tibial spine, and permitted by the relaxation of the anterior crucial ligament in this position; in this the internal condyle remains nearly fixed, the chief movement taking place on the outer side owing in great measure to the mobility of the external semilunar cartilage. The other is a movement of true rotation round a vertical axis running through the external condyle, in virtue of which, when extension takes place, this remains nearly stationary; while, on the other side, the internal tuberosity of the tibia is rotated outwards, carrying with it out of the way the internal semilunar cartilage. The anterior crucial ligament has very little to do with checking this movement, which is mainly controlled by the obliquity of the internal lateral ligament.

In the accident that I have described, at the very instant that rapid and complete extension is made, instead of the inner side of the tibia being rotated outwards as it should be, it is the inner condyle of the femur that is carried in this direction (or the inner tuberosity of the tibia inwards) so far as the posterior crucial ligament and the posterior ligament of the joint will allow it, for the lateral ligaments have no influence, the external being too near the axis, the internal sloping downwards and forwards. As a consequence of this, the anterior portion of the internal semilunar cartilage, which ought in extension to be carried forwards out of the way, is caught by the prominent internal condyle, and, owing to its wedge shape, driven violently to the front. So far as the cartilage itself is concerned, this is of small moment, as it appears to be a tissue especially constructed with a view to sustaining direct pressure; but when it is driven forwards in this manner, a violent strain is thrown on its ligamentous attachments, which they are not equally calculated to resist. The internal limb of the segment suffers little, for its half of the stress is rapidly weakened and toned down by its attachment to the coronary and internal lateral ligaments by its length, and above all by the direction of the strain, which would tend only to straighten out the curve of the posterior cornu. The outer limb, on the other hand, must suffer severely. Here, without anything to break or even modify the violence, full half of the strain falls directly on the attachment of the anterior cornu, stretching it or even partially tearing it from the bone, and causing the extreme pain and the rapid effusion; and this accounts for the occasional prominence on the front of the joint when the cartilage is completely displaced, and for the exceedingly tender and accurately defined spot which corresponds precisely to this attachment.

In treating a sprain, as in everything else, a definite and accurate diagnosis is of the utmost consequence; but I am afraid the smallest things, perhaps because they interfere mainly with amusements, are sometimes the most baffling. Nothing is more easy in a young and healthy adult than to assist the absorption of a slight synovial effusion; nothing more difficult than to prevent its recurrence when the same causes are allowed to work. Of course, if people will abstain from lawn tennis after meeting with an accident of this kind and use reasonable care for some time, there is a fair amount of hope that the same mischief will not return, though I regret to say I have known it brought back, in a very much aggravated form, by a single game after two years' complete abstention. Carefully strapping the joint would probably be the most effectual method, but I scarcely think it probable

that many patients would be found willing to submit to it. The only mechanical contrivance that I have found to be of any service, and that only with complete abstention from fast play and in those who will be sufficiently watchful, is an accurately made knee-cap, preferably laced, with a pad in the popliteal space, and another over the internal semilunar cartilage, to be worn, of course, only during play. The inconvenience is great, and the interference with play so considerable that some may prefer leaving it off altogether; but the danger is so real that that alternative is, I believe, the only one.

Porchester-terrace, W.

CLINICAL ILLUSTRATIONS OF PUERPERAL INSANITY.

BY A. CAMPBELL CLARK, M.B. ED.,
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(Continued from page 99.)

CASE 5.—Mrs. A. R——, aged twenty-eight years, was admitted on Sept. 23rd, 1881. She had been insane nearly four years, this being the first attack. The cause was puerperal, and she was not epileptic, suicidal, or dangerous. Her first child was born four years ago, and about three months after she became insane. The first changes noticed were diminished physical energy and unwonted quietness and taciturnity. She neglected her household duties, and did very little work of any kind. In one week after she became excited, imagined she saw men taking her sister away in a cab, and exhibited other evidence of visual hallucination. The severity of this attack of mental excitement ceased in six months; but she was never quite herself, for she did not regain fully her natural cheerfulness of disposition, but remained quiet and apathetic. The next incident in her history was a miscarriage, but her mental condition was not disturbed by it. Some time after this her husband went for a voyage on account of his health, and six weeks after (when three months pregnant) the patient had a second attack of excitement, with morbid religious ideas about her soul, as before. When labour came on, as it did at full time, it was natural, and of short duration, and did not affect her condition one way or other. The hallucinations of sight did not show themselves before or after this parturition; but prior to marriage, and at the time now under consideration, hallucinations of hearing were present. (It has been asserted that all her married life she has been subject to hallucinations of hearing, but this I do not insist upon as I am not able to give any specific illustration of it.) She had confessed to her husband that before and after marriage she indulged in masturbation, and delusions regarding her husband now existed; she doubted his fidelity, was said to have nursed her last child over two years; her husband believed there was hereditary history of insanity. On admission there was no exaltation, no excitement, the depression being more negative than positive. She did not spontaneously or after interrogation give expression to any feeling of misery, but she did not seem to be even in average spirits. There were decided enfeeblement, a querulousness, and an entire absence of moral and intellectual vigour. The memory was impaired and ideation slow; she grumbled against her husband for going abroad and leaving her, as she stated, without sufficient to support herself; but there was reason to believe that this idea was a morbid one. She complained of pain at the lower margin of the liver and over both ovaries, and had a delicate look. The following is the course of the case:—Sept. 23rd: Evening temperature was 97·8°, pulse 70. —24th: Morning temperature 98·2°, evening 98°; slept well last night, and conducted herself very quietly. Was put on extra diet.—Oct. 17th: Has worked every day, but as she was found to be pregnant the vigorous exertion to which she was prone was discouraged, and she was kept for the most part knitting and taking walking exercise in the grounds with the other patients.—Nov. 25th: The patient rose this morning and went about her toilet as usual, without giving any indication by word or sign of anything wrong; but while sitting at prayers she felt faint and sick, and it was found that uterine hæmorrhage had occurred. Examination per vaginam revealed clots, which were removed. Ordered half a grain of morphia suppository and twenty minims of tincture of muriate of iron every three hours, and to be kept in bed. The evening report showed that there had been a slight reddish discharge all day, and that the patient was rather restless.—26th: Was very restless last night; the slight discharge still continues. In the afternoon she had a few slight pains; was more than usually talkative, looking forward to the birth of her baby, and had confident expectation of twins. —27th: Labour set in about 4 A.M.; the patient had passed a very restless night previously. Gave birth to a boy at 7 A.M.; the placenta came away easily all in one piece, but with several semi-fluid and organised clots adherent to it. The uterus contracted well, and the vagina was syringed with a weak Condy's lotion. For several hours after labour was over she would insist that there was another child in the womb, and worried about her baby, which is very feeble. The patient slept for one hour at noon; very little discharge, but at 5 P.M. a clot came away; appetite good; the child lived ten hours. Subsequently septicæmia developed, and progressed to a fatal termination, depositis having excited inflammation in the lungs, pleura, and peritoneum. The rigors were frequent and severe, and the temperature was very high and erratic in its variations. A prolonged period of acute excitement accompanied the septicæmia, prominent features of which were hallucinations and suspicions.

CASE 6.—Mrs. S——, aged thirty-one, multipara, was admitted on May 17th, 1881, having been insane eight months. This was her first attack. Her father died of delirium tremens, her mother of uterine cancer, and there was insanity in the family, one sister being insane. She had five children. Eight days after the last confinement an abscess of the breast appeared, and in the second or third month she became depressed and hypochondriacal, her appetite and sleep failed her, and she attempted to poison herself. On admission, her temperature was 97·8°, and her weight 8st. 11lb. There was slight melancholic excitement; she was easily moved to tears; declared she was miserable; was quite coherent and her memory was good. She suffered from headache of occipital region and vertex, dimness of eyesight, and occasional specks; pupils were dilated and sluggish. There was retroversion of uterus, tenderness of os uteri, and pain externally. The case ran the following course:—The patient was ordered glycerine plugs to os uteri, directed to remain in bed for a few days, and was put on extra diet. She complained of weakness in her back and legs. Nights restless and sleepless for some weeks after admission; could not fix her mind on any kind of employment; her appetite was irregular. She said that at night the devil came and put his "clutches" on her face, and that she heard his chains rattling. Smelt sulphur on her bedclothes, and refused her beef-tea because she said it had a smell of sulphur; said she heard the death warning—unearthly voices telling her she was to die and go to hell. She once attempted to strangle herself. In October she was sent to work in the laundry and thereafter steadily improved; complained of headache and weakness, hallucinations disappeared, and she became more cheerful and amiable. Menstruation was irregular and scanty up till November, then it became natural and regular. She often grieved because she could not feel an affection for her husband and children, and after a visit from them was always much affected and wept piteously. In January, 1882, she was tried at home but relapsed, and was brought back to the asylum; she had then accused her husband of improper conduct with her nurse (a delusion). In three months, however, after being out on pass for a fortnight, she was discharged recovered (May 20th), and has since (now twelve months ago) done well.

CASE 7.—Mrs. E. R——, multipara, was admitted on Jan. 13th, 1882. She had been insane a week; this was not the first attack. The medical certificates stated, "She is much excited; shouting and talking incoherently about religion; singing in a nonsensical manner." After the birth of the second child she was sleepless from the first, and felt pain in the back of the head, and was feverish. The lochia ceased, and the bowels were very costive. Insanity at once appeared, of the mania type. The period between the second and third labours was nineteen months. After the birth of the third child the present attack came on within a week. She was sleepless from the date of the child's birth. There was no history of pelvic or other inflammations at any time in connexion with childbirth. On the sixth day hallucinations of sight appeared—saw angels, evil spirits, &c., on the wall. The bowels were not moved till the third day; the lochia were not profuse, but were considered natural by the midwife. The milk was suppressed from the first. On

the eighth day the patient would not rest in bed; she lectured on religious matters, and had hallucinations of hearing—heard her mother (who is dead), her father, and far-away friends. All this time the patient had taken her food exceedingly well. There was no exaltation, but much excitement. She kept talking in a whining way very excitedly. There was no evidence of depression, though at times she had the frightened look of one suffering from delirium tremens. There was no sign of enfeeblement. The memory could not be tested owing to her incoherence. The patient was quite oblivious of her surroundings. The attention could not be fixed long at a time. The pupils were dilated and sluggish. The tongue was covered with a slight creamy fur, and was moist. Pulse 96, small and feeble; heart's action weak but regular; respiration hurried. There were no abnormal pulmonary physical signs. She was ordered ordinary diet, with a pint of milk extra daily, and a pint of porter.—Jan. 14th: Had not slept all night; was very noisy, getting out of bed, singing and screaming. Pulse varied, running high when excited, but frequently below 80 beats per minute. The appetite was very good; the lochia were brownish, scanty, and with offensive odour, and the breasts soft and flaccid. Hallucinations of sight and hearing were present. During the day the excitement was most intense; the bowels were not moved; the abdomen was tympanitic; tenderness on pressure over the uterus. An ounce of castor oil was prescribed. — 15th: No sleep; still very excited; discharge more scanty, and still offensive. Ordered vaginal injections of diluted Condy's fluid, and, as the bowels had not been moved, an enema of soap-and-water. Very destructive, and tried to burn her clothes; obstinate constipation, which was ultimately removed. The uterine symptoms were relieved and ultimately recovered from, and after a period of stupor, alternating with spurts of excitement, she eventually recovered.

CASE 8.—Mrs. C——, aged fifty-five, multipara, had been insane twenty years. For several years she was treated at home, but had ultimately to be sent to an asylum; the mental disorder appeared at the end of the first week. She had suffered from severe headache of vertex during pregnancy and after parturition. Slept very little after child was born; after previous labours had slept well. Had had ten children, five being dead, one of "decline," one of hydrocephalus; one son living is imbecile. The mental disorder evinced itself suddenly; the first symptom observed was her starting out of bed in the middle of the night, saying she heard a shot, and people rubbing stones against the wall (hallucinations of hearing); hallucinations of touch appeared early, but those of sight not till some years later. She imagined her food was poisoned, turned against her husband and child, and, throwing the latter from her, said it was not hers. Delusions as to her being the wife of Christ showed themselves some years later. She used to throw her clothes into the fire, and said they were old things exchanged for her good things. Her present mental and bodily state is as follows:—She suffers from mitral disease, but has no lack of energy. She gives expression to numerous delusions and hallucinations with great volubility. She has no goodwill towards her husband; believes him unfaithful. She enjoys seeing her children. The hallucinations are intensified at night, and form largely the basis of her delusions. She feels, sees, and hears her persecutors; has the delusions that men ravish her. She is an exceedingly clever housewife, a quick intelligent woman, and has a most excellent memory. The following quotation is a fair example of her insanity:—Feb. 4th, 1882: Said she saw reporter's father last night (delusion of identity, if not an hallucination); that when in bed she felt people striking her with keys; that she has a carpet twenty shillings a yard that was in the hall at Bethany, where our Saviour was born, and that she was three days in heaven at that time, and that she is the Saviour's wife.

CASE 9.—Mrs. G——, admitted April 19th, 1882, aged twenty-five, a multipara, had been insane one week, this being her second attack. The medical certificate stated her to be restless, agitated, and anxious; she afterwards became outrageous, sleepless, incoherent, and tried to escape from the house. She thought some one had tried to cut her throat, and that a bag of gold was hid under the bed. Her baby was born on April 7th, and her mind changed on the 15th (ninth day). She was attended by a midwife, and had no doctor. After-birth came away on third day, and gave her a fright at first, but she soon calmed. Next night she wet her bed, thought it was "flooding," and she became agitated; slept well all this time. Lochia ceased considerably on the fifth day, and the milk was suppressed on the same day. On the eighth day she threw herself out of bed as if by impulse, soon calmed, but the excitement broke out again ere long. Bowels confined; appetite all along good. Had lost all interest in her husband and child. On admission there was mild exaltation of feeling; had an expression of happiness. No intellectual vigour; considerable excitement. Sang a great deal, and frequently interposed original lines in the course of her song very much out of metre. Memory fairly good, could answer questions, was apt to be incoherent in her sentences, but was fairly intelligible. Attention easily fixed for the moment, but apt to wander. The pupils were dilated and sluggish. There was slight impairment of percussion note under right clavicle, otherwise normal. The lochia were scanty, pale, and offensive, the urine very scanty and albuminous, and the breasts flaccid.—April 20th: Had slept very little, was not noisy but very restless. Was ordered vaginal injections of Condy's fluid.—21st: Skin yellow over face and body. Was very excited, trying to put her clothes on the fire, taking them off and lying on the floor; thought she smelt turpentine in the room, and that her head was on fire. Did not sleep last night.—23rd: Looked sick and was inclined to sleep; was less excited, said she smelt sulphur. The lochia had almost ceased, the skin and tongue were dry, and the bowels confined.—26th: Breath still sweet; tongue getting dry and baked, but not brown; looked much more exhausted to-day; did not give expression to her delusions so frequently; pulse 108, of fair strength; palpation over abdomen revealed no sign of pain; percussion revealed nothing abnormal. Per vaginam a loaded rectum was felt, and fulness in right lateral fornix. Ordered two grains of quinine every three hours, Condy's injections to be continued, laxative enema, and three ounces of brandy daily in dessertspoonful doses. Room to be sprayed with carbolic acid, and excreta, &c., carefully disinfected. Her subsequent progress was slow; enemata of defibrinated blood were tried, her room was sprayed with carbolic lotion, and there was gradual disappearance of septicæmia and coincident mental improvement, ending in recovery.

CASE 10.—Mrs. B——, aged twenty-four, multipara, was admitted on May 18th, 1882. She was insane two months, this being the first attack. She had a shiver after the birth of her first child, but no mental aberration. She also had a shiver after the birth of her second child on the fourth day. She then felt pain in the left pelvic region, and the lochia became almost entirely arrested. She could not sleep, got excited and restless, and would not keep in bed. On the eighth day she got more unruly, and the doctor then had her head shaved, and the back of it severely blistered. Thereafter she became quiet, obstinate, resistant, and was still the subject of delusions. The bowels were not moved for several days after the birth of the child. On admission there was no exaltation, but there was excitement of muscular character. The patient was always on her feet, and in a semi-bewildered fashion tried to make her way out of the ward. She looked depressed, and worried herself, but talked very little. Physically there was impaired percussion note and prolonged expiration below the left clavicle; a large area of percussion dulness over the left iliac fossa was present, but no tenderness on palpation. — May 19th: Did not sleep much last night. As she refused food, she was fed with the pump, and ordered castor oil, also to have two drachms of cod-liver oil at bedtime; the urine was albuminous, but abundant in quantity.—20th: Slept well, and took a good breakfast. She was ordered to have a pint of porter daily; being again obstinate and refusing food, she was fed with the pump.—24th: A little better; walked straighter; took her food better. She was given a mixture of sulphate of quinine and dilute nitro-muriatic acid; had hallucinations of sight, and no affection for her husband; complained of frontal headache.—June 3rd: Weight 5 st. 11 lb.; has lost 4 lb. Ordered an enema of defibrinated blood night and morning; bowels regular; urine still albuminous.—7th: She was very obstinate and resistant. As she did not take her porter well, four ounces of port wine were ordered daily instead. Slept very well; no albumen in urine; complained at intervals of joint pains. Her subsequent progress mentally was slow, and her physical improvement more rapid. She ultimately settled down to useful occupation, and was discharged recovered on Nov. 4th, 1882.

(To be concluded.)

ON THE

HISTORY OF FEVER IN THE ROYAL NAVY.[1]

BY SIR WILLIAM SMART, K.C.B., R.N.

THE author gave a sketch of the sanitary history of the navy up to the present time, exemplified by the greater or less prevalence of fevers at various periods, showing how much that class of diseases was answerable for the failure of numerous expeditions, and the cause of incalculable sufferings and loss of life. From 1585, when Drake lost 750 out of 2300 men by yellow fever in the West Indies, and again in 1594, when Drake and Hawkins fell victims there, up to 1794, when Sir John Jervis and Sir Charles Grey reduced the French islands, probably not less than 100,000 men were sacrificed by yellow and remittent fevers alone on that single station. On the home station, from the Thames to Gibraltar, from the days of Howard and Drake to the end of the Seven Years' War with France and Spain, not less probably than 150,000 men were lost by typhus. The former were from tropical endemic malaria, and the latter from contagion received from the gaols on shore, and disseminated from ship to ship, and dispersed around the coast towns at which the sick were landed; but it soon died out when carried to tropical climates, whilst the West Indian fevers were never brought to England. In each there was an essential cause—in the former the product of vegetable, and in the latter of animal decomposition—much aggravated in its intensity in ships by overcrowding, foul atmosphere, defective nutrition, and inattention to cleanliness of person and of locality. From French naval history it is learnt that from the same causes their fleets suffered, at the same period, even more terribly than our own. For example, in 1757 a large fleet infected with typhus left Brest for the protection of Louisburg, and returned to it in 203 days totally disabled by typhus, by which the town was infected grievously through five months, with a loss of above 10,000 lives, including five physicians, 150 surgeons, and 200 priests, which far exceeds anything in our own annals from a similar cause. Two years later the fleet under Sir E. Hughes which defeated that of Admiral Conflans was at sea six months before the battle took place, and yet on the day of it there were only twenty-four sick out of 14,000 men, owing to their having been kept well supplied with fresh meat and vegetables. In fact, whenever, before or after that event, fever and flux committed ravages, there was always the scorbutic diathesis undermining the general stamina of the men. The first and second voyages of Captain Cook—1768 to 1773—afford a contrast: in the first, with scorbutic diathesis, 35·7 per cent. of the crew died of tropical fevers with flux in four months; but in the second, only one man died of disease in three years, under sanitary and antiscorbutic precautions. These are facts typical of the period. From that time, however, there was much less of fever, as before the next naval war, 1778 to 1782, the sources of fevers were cleansed by improved management of the gaols, and by improvements in the ventilation and the cleanliness of ships, but the causations of scurvy remained unmitigated, notwithstanding the experience of Hawkes' fleet. In 1759-60 the admissions to Haslar for fever were 393 and for scurvy 119 per 1000 of all admissions; but in 1782 there were 329 and 112 respectively, showing a larger proportional abatement of fever than of scurvy; and in 1780 the Channel fleet, after a ten weeks' cruise, returned with 2400 men sick of scurvy, proving that the causes of scurvy were as rife as ever, while the causes of fever were less so. From that period, however, there was a considerable abatement progressive in both; but at no period was it so marked as immediately after the mutiny in 1797, which was followed by great reforms in the quantity and quality of the seaman's rations and pay. In proof of this, the data from the same source show that in 1796 the admissions were in the ratios of 257 per 1000 for fever and 74·5 for scurvy, and that in 1799 they had declined to 200 and to 20 per 1000 respectively, being a rapidity never before experienced, and that, too, in war time. In the last century, and that very late in it, scurvy disappeared in its epidemic type, and epidemic typhus has been unseen since, on account of reforms that have acted preventively, as soon as the propriety of them has been recognised. Superior means of ventilation have been invented; cleanliness of ships and of persons has been enforced; while overcrowding, by reason of employing larger ships in proportion to the crews, has been lessened; iron tanks have been substituted for wooden casks for water; and a very progressive improvement in the food, in quality and in variety, as regards both fresh meat and vegetables, has taken place wherever possible. Cinchona was given until supplanted by quinine as a preventive of fever; lime-juice, as a preventive of scurvy; and more frequent intercourse on shore has produced cheerfulness amongst the seamen; while the half pint of spirits allowed daily in the last century, encouraging if not legalising drunken habits, has been abolished save on emergencies, and sobriety is no longer the rare virtue it was formerly in the navy; and, finally, the employment of iron instead of wood in naval construction, and the use of steam as a motor power, render long detention at sea unnecessary—all these changes have combined to make the navy as healthy as life on shore. The last century was, in a medical sense, devoid of experimental spirit in the navy, while such cannot be said of it since the dawn of the present century, when medical officers first began to obtain a recognised position in its ships and service.

The latest hospital statistics, from 1869 to 1877 inclusive, yield, at Haslar and Plymouth, 51,584 total admissions, with 2539 for fevers of all types, and no scurvy, being less than 50 per 1000, showing a decline of 150 cases per 1000 since 1799; and of mortality from 70·5 to 60·5 in each 1000 cases of fever, exhibiting the extent of mitigation as regards febrile forms of disease in the present century.

It is to be lamented, for the good of the service, that hospital returns ceased in 1877 to be published, thus precluding useful and encouraging comparisons in future.

[1] Abstract of a paper read at a meeting of the Epidemiological Society.

LUMBAR COLECTOMY.

BY CLELAND LAMMIMAN, F.R.C.S. ENG.

THE operation called lumbar colectomy seems likely, in the advance of abdominal surgery, to become a generally adopted one, and as since its introduction it has only been performed on one or two occasions, the following notes of a case upon which I have recently operated may prove of some value to any who are purposing to pursue this method of relief in cases where the position of the stricture can be settled as lying in either the upper part of the sigmoid or in any part of the splenic flexure of the colon.

I first saw Mrs. ——, with Dr. Ivers of Tonbridge, on Feb. 2nd (Friday), when the following history was given:—On the previous Sunday she failed to effect her usual morning evacuation, and towards the evening had some amount of distress, when vomiting came on. Dr. Ivers had given several doses of purgative medicine without effect, and had succeeded in passing O'Beirne's tube into the bowel (its whole length apparently). She had taken only fluid food in small quantities with opium. There was no history of cancer.

Physical examination.—A well-nourished woman of fifty-four years, dark, somewhat sallow, and inclined to obesity. Abdomen not tender, but filled with flatus, which could be perceived rolling the intestine over and over with loud noises. No tumour could be detected; no hernia. No evidence of anything wrong in rectum. She informed us that upon several occasions, which had increased in frequency lately, she had had great pain in her abdomen, with constipation and vomiting, once or twice with jaundice.

Concluding that we were dealing with an occlusion of the intestine, we resolved once more to give a competent purgative, hoping that the case might yet turn out to be fæcal impaction. This produced in an hour or two some very suspicious-looking vomit. In the meantime, we introduced O'Beirne's tube into the rectum, and apparently into the sigmoid flexure, as the whole tube, save an inch or two, was passed in; but when we injected gruel, we found that not more than half a pint was retained, the rest flowing out as it was injected. Now, as at the operation the stricture was found in the upper part of the sigmoid flexure, it is plain that the tube must have turned upon itself. There was during this period and up to the time of operation no fever. After the stercoraceous vomit had appeared, we used no food, save ice in small quantities, by the mouth, using by the rectum the juice of raw meat

expressed by the tincture press, and Carnick's peptonoids, with which latter we were very pleased. Small quantities of morphia were used hypodermically twice in twenty-four hours.

We advised colotomy at once, and should have selected the right loin because of the distance to which the tube was introduced, but the patient would not consent, resolving to have Mr. Bryant down to see her. On Sunday, Feb. 4th, that gentleman came down, and he concluded that an operation should be performed without delay; but, impressed with the fact that we should, notwithstanding the passing of the tube, find the stricture in the descending colon, he directed me to open the left loin, and, if not then successful in finding the stricture, to draw down the bowel through the wound and search for it; if not finding it there, to reject the left, fasten up the wound, and proceed to open the bowel on the right side. And he added, "When you come down upon the stricture, after fastening the upper aperture of the bowel in the usual way to the skin, proceed to remove the stricture itself. I have once done this, and am satisfied that it will soon be the usually adopted operation for this trouble. I would call it colectomy."

The patient obstinately refused the operation until Feb. 14th, when, without food by the stomach for seventeen days, she was manifestly going downhill; there had been no rise in temperature. On this day, having at last prevailed upon her to allow something to be done to give her a chance of life, which seemed now almost hopeless, with the assistance of Dr. Ivers, Dr. Hawthorne of Tonbridge and Mr. W. Rix of Tunbridge Wells, I proceeded to operate. Dr. Hawthorne administered a mixture of one part absolute alcohol, two parts chloroform, and three of ether, on a list cone; it answered admirably, and after one hour, during which the operation was proceeding, it still acted well and did not depress. Making the usual incision, six inches long, half-way between the last rib and crest of the ilium, I dissected as quickly as possible down to the fascia transversalis, but having to deal with very free hæmorrhage my progress was somewhat slow, as I had to tie many vessels as I went on. Then, having cleared the fascia through the whole length of the wound from muscle and fat, I divided the fascia transversalis upon the director and my forefinger. Now, having scraped away a large quantity of sub-colic fat, I came upon the intestine, not a distended but a collapsed one, and speedily found the stricture itself just at the bottom of my incision, now some inches deep. My colleagues assisted me in raising the gut to the surface, but it was not an easy matter, for it did not leave its bed as I had hoped it would; it required much patience and gentle force to accomplish this. At last, having freed enough of it, I opened the intestine above the stricture, fastened it to the skin, and having placed a very stout ligature of carbolised catgut round the gut below the stricture, I cut the latter completely away. Having to our satisfaction concluded that all hæmorrhage had ceased, I cut off the ends of the ligature short, and returned it into the abdominal cavity with the lower end of the intestine, fastened up as much as seemed necessary of the wound, and placed the patient in bed, with warmth to the head and feet and a small hypodermic in the arm.

Upon examination the stricture proved to be scirrhus, and the aperture so small that it would hardly admit a probe. In the course of an hour or two a large amount of fæcal matter passed through the wound, but the patient was so weak from her starvation that for hours we could not rally her from the prostation following the operation, which but for this I am convinced would have been successful. She sank about forty-eight hours afterwards. No post-mortem examination was made.

Tunbridge Wells.

ANOTHER EPIDEMIC OF TRICHINOSIS NEAR THE SOURCES OF THE JORDAN.

By JOHN WORTABET, M.D.,

PHYSICIAN TO THE HOSPITAL OF THE KNIGHTS OF ST. JOHN, BEYROUT, SYRIA; CORRESPONDING MEMBER OF THE EPIDEMIOLOGICAL SOCIETY, ETC.

IN a paper which appeared in THE LANCET, March 19th, 1881, I gave an account of an outbreak of trichinosis from eating the flesh of a wild boar, near the sources of the Jordan. Two hundred and sixty-two persons ate of the animal (November 25th, 1880), and when I visited the place of the disaster at the beginning of the new year five had already died, and the rest were more or less ill with the disease. One more died afterwards, and I succeeded in obtaining from the body a piece of muscle, in which I found trichinæ in great abundance, and thus verified the nature of the epidemic. This death happened about the fiftieth day after infection, and the trichinæ was still non-encysted. A few weeks after one of the victims came into the hospital for a slight operation in the eye, and he allowed me to take out a minute piece of muscle from the calf of the leg for examination. It was about the hundredth day after infection, and I found the parasites in as great abundance as before, but they were all by that time encysted. From frequent communication with the place, I heard that in a few months all the sufferers gradually recovered, the last symptoms being slight muscular pains and general debility.

Another outbreak of the same nature has recently occurred in Ain-Kiniah, near Banias (the ancient Cæsarea Philippi), and a young medical man, a former pupil of mine, who was called to the scene of the epidemic, has sent me the following particulars:—"About the 1st of March of this year a fine boar was shot in the marshes of the Jordan, and brought to Ain-Kiniah, and a part of it was sent to three other neighbouring villages. Some forty or fifty persons ate of it, and they were all taken ill between the fifteenth and twentieth day afterwards. The general symptoms in every case were the same: muscular pains, œdema, and fever. The muscular pains were not limited to the extremities, but extended to the muscles of the face, the lower jaw, the neck, and abdomen. The œdema was often very great; in one case the face was so swollen that the eyes were closed, and in an infant the general œdematous state of the body was such that its life was despaired of. The fever always increased at night. It is strange to say that not one of them died, and that they are all in a state of convalescence.

It appears that this is the third outbreak of trichinosis which has happened in those parts in recent years, the first having taken place about 1868, though wild boars are numerous in the jungles of the Jordan, and often shot and eaten during the winter and early spring. The flesh is always eaten in that part of the country in a raw or imperfectly cooked condition, and this accounts for the fact that no one who eats it escapes infection. In the outbreak of 1880 there was a remarkable exception in the case of the head of the infected animal, which was very thoroughly boiled before it was eaten, and of all the persons who ate of it not one showed any sign of the disease.

Note.—It is remarkable that there is a general unanimity among Eastern nations as to the unwholesomeness of pork. It is interdicted in the sacred books of the Hebrews and Mohammedans; and among the ancient Egyptians—from whom the Hebrews borrowed many of their sanitary laws—the pig was an emblem of Typho, the god of evil, and was held by them to be unclean and abominable. From personal observation and experience I have found the use of pork in Syria decidedly unhealthy. The wild boar in winter is a delicacy, but unless previously examined with the microscope, according to German law, or cooked more thoroughly than is usually done, its use cannot be free from the danger of communicating trichinæ to man.

SPINA BIFIDA SUCCESSFULLY TREATED BY INJECTION, AND EXAMINED POST MORTEM.

By NOBLE SMITH, F.R.C.S. EDIN.,

SURGEON TO THE ALL SAINTS CHILDREN'S HOSPITAL, AND TO THE ORTHOPÆDIC DEPARTMENT OF THE FARRINGDON DISPENSARY.

A. W——, aged two months, was born with a deficiency of the arches of the lowest lumbar and upper sacral vertebræ. The size of the tumour was in circumference at the base 8½ in., from side to side over the tumour 5½ in., from above downwards 4½ in. The tumour was fully distended, translucent, and presented an ulcerated surface in the centre, secreting fluid. There was no appearance of large nerves in the sac. The right leg was small, deficient in muscular power, and the foot was affected with talipes valgus, but in other respects the child appeared to be healthy.

I punctured the tumour with a No. 3 trocar low down upon one side, drew off two ounces of clear, straw-coloured fluid until the tumour was diminished to half its original size, and injected forty minims of Dr. Morton's iodo-glycerine fluid, and closed the opening with collodion and plaster. The constitutional disturbance was severe for twenty-four hours, after which the tumour began to cicatrise, and gradually shrivelled up and became like a piece of rough puckered leather. The operation was performed upon the 5th of September, 1877, and in twenty-five days the tumour consisted only of rough thickened skin, which was slightly protuberant from the surrounding surface. A part of the wall of the sac the size of a shilling remained there, and apparently unaffected by the injection. This could doubtless have been destroyed by a second injection, but the mother refused to allow another operation because her child had seemed to suffer so much from the first one. The treatment was so far perfectly successful, and I anticipated a satisfactory progress of the case, although I should have preferred completing the transformation of the wall of the tumour.

In February, 1878, nearly six months after the operation, hydrocephalus made its appearance, and ran its course in two years, at the end of which time the child died. I was permitted to make a post-mortem examination of the spina bifida. Externally the remains of the tumour appeared as thickened and puckered skin, and resistant to the touch. At the centre was situated a small patch, less than the size of a shilling, of thinner skin, beneath which could be felt a small cavity. Upon dissection the remnant of the tumour was found to consist of very dense fibrous cicatricial tissue, in the form of fibres and bands passing in all directions, and closely united together. The deficiency in the wall of the spinal canal was blocked up by this cicatricial material, but with difficulty a very small probe could be passed along a tortuous passage leading from the small cavity, already referred to, to the canal. There can be no doubt that a second injection would have completely obliterated this small cavity and its connexion with the canal, and have rendered the tumour more thoroughly solid. The cicatricial tissue did not extend beyond the opening into the canal, but it formed a remarkably firm wall in place of the deficiency of bone. I could not discover any nerves passing from the canal to the wall of the sac.

The result of this examination seems to me of value, as supplying a proof that an efficient closure of the deficiency in the vertebræ can be effected without encroachment upon the spinal canal.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. GEORGE'S HOSPITAL.

SUTURE OF THE MUSCULO-SPIRAL NERVE SIX MONTHS AFTER ITS COMPLETE DIVISION, WITH ENTIRE RESTORATION OF ITS FUNCTIONS ABOUT TWELVE MONTHS AFTER OPERATION.

(Under the care of Mr. PICK.)

IN the number of THE LANCET for June 16th Mr. Holmes narrates the history of a case of suture of the musculo-spiral nerve five months after its complete division. In the remarks which follow, Mr. Holmes alluded to a patient under the care of Mr. Pick on whom an operation very similar to the one reported had been performed. The operation was thought to have failed, and the boy was discharged, having apparently derived little, if any, benefit from the treatment. Through the kindness of Mr. Coltart of Epsom, under whose care the patient was in the first instance, an opportunity has recently occurred of examining the case, and it is found that complete recovery, with perfect restoration of the functions of the nerve, has taken place. An account of the case will therefore be of interest, especially as it resembles Mr. Holmes's case in the fact that a long period of time elapsed before any decided improvement took place.

William C——, aged thirteen, was admitted into the hospital on Sept. 21st, 1881. The history he gave was that six months prior to admission he received a stab from a pointed, half worn out table knife in the left arm, some little distance above the elbow-joint. The wound was dressed at home, and healed in about a fortnight's time. The boy was not seen by any medical man. According to his own account and also that of his mother, he was able to use his hand and arm as well as ever after the accident. Of this both the boy and his mother are quite positive. Shortly afterwards he began to notice slight dropping of the left wrist. At first he was able to extend the fingers, but in time all power of extension was lost and the wrist permanently flexed. Gradually the forearm became wasted and cold, and the loss of power more complete.

On admission there was found to be a cicatrix about four inches above and a little behind the external condyle of the left humerus. It was about three-quarters of an inch in length, and was not adherent to the bone or deeper parts. The humerus beneath seemed to be a little irregular and bossy, and pressure on the spot was attended with pain. The muscles of the forearm were wasted, especially the supinators and extensors. The wrist was dropped, the fingers flexed, and there was no power of extension. There was a sensible diminution of temperature over the forearm as compared with the other side. In the clefts of the fingers supplied by the radial nerve the temperature, as indicated by an ordinary clinical thermometer, was two degrees lower than in a corresponding position on the right side.

On Oct. 6th, 1881, an Esmarch's bandage was applied, and an incision about two inches long was made just below the cicatrix and in the course of the musculo-spiral nerve. The nerve was readily exposed. It was found to be completely divided, the ends being separated for about half an inch, and merely connected together by a little cellular tissue. The upper end was bulbous and enlarged, the lower end wasted and bound down to the subjacent bone. The latter was freed by dissection. Both ends of the nerve were refreshed (the bulbous neuroma being removed), and were sewn together with fine catgut suture. The wound was dressed antiseptically.

After the operation the boy complained of severe pain for about six hours. This, however, suddenly ceased in the evening of the day of operation, and he passed a good night. The wound was some time in healing—in fact, it was not completely healed for about a month. At the end of a fortnight there seemed to be some power of extension returning, but it was very slight. The boy stated that sensation was much greater than before the operation; but it was believed that he rather exaggerated his feelings in this respect, in dread lest another operation should have to be performed. There was no doubt, however, that the temperature of the limb gradually increased, for on his discharge from the hospital no difference could be detected upon comparing the two sides of the body.

The patient was kept under observation till Dec. 23rd, when he was discharged with instructions to show himself at the end of three months. At this time the wrist was still dropped, but he could move his fingers slightly, and it was thought by some that the extensors were a little more developed than upon his admission. The supinator longus had not improved in the least, but had dwindled down to a mere cord, which could be pinched up with the finger and thumb.

Nothing more was seen or heard of the boy until July of the present year, when he was sought out and sent up from Epsom by Mr. Coltart for inspection. The functions of the nerve are now completely restored. Sensation is perfect, and all the movements of extension of the wrist and fingers are performed as well on the one side as the other. The muscles on the injured side are not quite so fully developed as on the sound side, but then it must be remembered that the injury was in the left arm, and that he uses the right one principally in his daily work. He seems to be unable to give any accurate idea as to when the improvement first became obvious to him, but from his account it would appear to be probable that there was no very marked change for at least twelve months after the operation. The bulbous end of the nerve, which was removed at the operation, was subjected to microscopic examination, and it was found that the

enlargement was principally due to increase in the perineurium, but also partly to connective tissue growing up between the nerve bundles. The growth had caused the tubules to be pressed together, the axis cylinder having been completely atrophied.

QUEEN'S HOSPITAL, BIRMINGHAM.

TWO CASES OF ULCERATIVE ENDOCARDITIS WITH BRIGHT'S DISEASE, IN ONE OF WHICH ULCERATION THROUGH THE AORTA TOOK PLACE.

(Under the care of Dr. HUNT.)

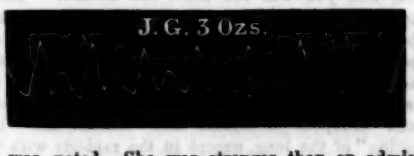
FOR the following notes we are indebted to Dr. Leslie Phillips, late house-physician.

CASE 1.—Jessie G——, a dressmaker, aged twenty-one, was admitted on November 28th, 1882. She had scarlet fever when young. Eight weeks before admission she had an ulcerated throat, attended with enlarged cervical glands, followed by rheumatic fever. About ten days before admission the feet began to swell. She had had headache and vomiting.

On admission there was marked anæmia, with slight œdema of feet. The heart's apex-beat was diffused and its dulness increased upwards to the third cartilage; there was a systolic bruit at the apex and also at base, the latter being of maximum intensity in the pulmonary area. There was visible pulsation of the neck vessels. There were no abnormal pulmonary signs. The morning temperature was 101° F.; the evening temperature was also 101°. Pulse 96; respiration 29. She passed 112 ounces of reddish urine, specific gravity 1003, containing a cloud of albumen when boiled. The next day the urine was smoky, sp. gr. 1010, and contained a third of a column of coagulum. The microscope showed numerous leucocytes, blood-cells, blood-casts, and cellular casts. There was no tenderness on palpating the kidneys. The fauces were congested. There were no hæmorrhages in the fundi of the eyes.

Dec. 6th: The patient has vomited. The temperature has been hectic in its type, rising to 104° in the evening, and falling in the morning to 100°. She has continued to pass large quantities of urine—112, 64, 108, and 90 ounces daily. Pulse dicrotic. (Fig. 1.)—On the 13th a temporary improvement was noted. She was stronger than on admission. The next day, however, she was not so well. There were nausea, headache, and tinnitus in auribus. The quantity of urine fell to thirty ounces, and to the end of her disease the quantity did not rise again. Some œdema of feet. To take purgative mixture.—16th: Very ill. Evening temperature 104°. Headache and vomiting.—19th: Has continued very ill; rigor lasting three hours. The anæmia is very profound.—21st: Last two days has had constant rigors followed by sweats. The temperature rises during the rigor. There is a double bruit at midsternum.—22nd: Worse. Diarrhœa. Temperature taken at 6 A.M. and 6 P.M. was normal, while at 11 A.M. it was 105°. Urine, twenty ounces, containing two-thirds of a column of albumen coagulum and one-eighth of a column of pus.—23rd: Worse; vomiting constant, rigors occasional, diarrhœa continued. Sleepless, constantly moaning; cough appeared with pneumonic signs at the right apex. During the next two days the condition of the patient was very painful, there being extreme dyspnœa, præcordial pain, asomnia, desire for death, and delirium. The thermometer did not rise above normal. She died on the 26th.

FIG. 1.



With regard to treatment, among other drugs she took two grains of salicylate of quinine every hour from the 20th to the 24th, but without improvement. During the last three days the greatest benefit was derived from giving her five minims of the solution of hydrochlorate of morphia, with one minim and a half of the solution of sulphate of atropine occasionally. After each dose the breathing became easy and the patient comfortable, remaining so for some hours.

Necropsy.—Body moderately anasarcous; surface waxy. The kidneys were large, whitish, and lobulated, the capsule easily stripping; the two weighed 14½ oz. There was no pyelitis or cystitis. The liver was fatty, and weighed 57 oz. There was some passive effusion into the abdomen and into both pleuræ. The apex of the right lung was hepatised. The heart was hypertrophied, weighing 12 oz. One segment of the mitral valve was sclerosed. On one segment of the aortic valve was a peculiar condition, which was regarded as a stage of ulcerative endocarditis. The valve was one-eighth of an inch thick, almost as hard as cartilage, irregular on the surface, and of the same colour as the aorta. One of the other segments was also slightly affected. There were none of the friable, discoloured, pendulous vegetations usually present in ulcerative endocarditis.

CASE 2.—Harry P——, aged thirty, a brass-worker, was admitted on January 23rd, 1883. One sister died of diabetes. The patient had rheumatic fever fifteen years ago, and ever afterwards had had palpitation and dyspnœa on exertion. He began to feel ill six months before admission. He had thirst and frequent micturition, with passage of tea-coloured urine. There was vertigo, but unaccompanied with headache or vomiting. Five months ago there was swelling of the feet.

On admission, there was some œdema of the legs; anæmia was marked, the face being puffy and pasty. There was vertigo and pyrexia. The evening temperature was constantly 103°; the morning temperature varied from 100° to 101°; pulse 108; respiration 18. There was intractable asomnia; later in the disease this gave place to polysomnia. He passed large quantities of urine (62, 56, 51, and 112 ounces daily); neutral, specific gravity 1010, containing a cloud of albumen and no sugar. Microscopically, there were cellular and granulo-cellular casts, with blood-corpuscles. The impulse of the heart was indistinct within the nipple line; the dulness was increased transversely, and upwards it began at the third cartilage. There was a systolic blow at the apex and also in the aortic area, and there was an accent on the second sound.

February 15th: Asomnia, pyrexia, polyuria, and thirst have been the principal symptoms. Pulse dicrotic.—17th: Anæmia very marked; insomnia has given place to drowsiness. Evening temperature 104°.—23rd: There are no retinal hæmorrhages. For the last few days rapid breathing has been a marked feature, without chest signs. Respiration 36 during sleep.

March 1st: Anæmia still greater; sleeps night and day. Respiration 48.—2nd: Distinctly worse; vomiting; is deaf.—3rd: It is with great difficulty that he can be made to understand or answer questions; a slight trace of albumen in the urine.—6th: Failing gradually; passed evacuations in bed.—7th: Delirium; purpura appeared on the hands.—8th: Double murmur at the base of the heart, and also a sound like pericardial friction; he lies on his back breathing heavily, forty times a minute; mostly sleeping; is obviously dying, as he has been for six days past. He died comatose on the 9th.

Necropsy.—The kidneys "large white," together weighed nineteen ounces. The spleen contained two old infarctions and weighed twelve ounces. The liver large and fatty (five pounds six ounces). Each pleura contained about half a pint of blood-like fluid, which the specific gravity (1038) showed was not merely bloodstained serum. Two ounces of fluid blood in the pericardium, and a considerable quantity of clot and whisked fibrin, evidently the result of extravasation going on while the heart was beating. This clot was situated around the base of the heart, within the pericardium, and probably caused the friction sound heard the day before death. No pericarditis. The heart weighed thirty ounces, and was the seat of extensive ulcerative endocarditis affecting the left cavity valves. From the mitral valva depended large and easily detached friable and pigmented pendulosities. The process also extensively affected the auricular endocardium, while the aortic valves were similarly affected. Above the situation of the aortic valves, in the aorta, was extensive ulceration; eating its way through the coats of the vessel obliquely upward, it had perforated at

the posterior aspect of the aorta between that vessel and the right pulmonary artery, near the reflection of the pericardium, but its exact relations with that reflection cannot be precisely stated. (This heart has been forwarded to the Royal College of Surgeons museum.)

Remarks by Dr. PHILLIPS.—In many respects these two cases ran in parallel lines, a recapitulation of which may be of use. In both there were hectic fever, progressive anæmia, great thirst, asomnia, dyspnœa, vomiting, and the passage of large quantities of albuminous urine, coexisting with the signs of cardiac disease. In both the death-bed scene was prolonged. In the first case were superadded, recurrent rigors, angina, and diarrhœa, with death from pneumonia. The death in the second case was due to gradually deepening coma. In neither case were retinal hæmorrhages observed, but it must be stated that no examination was made late in the disease; and, as in the second case purpura appeared on the hands a day or two before death, a similar purpuric condition may have been present in the retinæ. The blood in the pleuræ in this case was attributed to the vascular (purpuric) condition; that in the pericardium probably leaked through the perforation in the aorta, and this latter theory finds confirmation in the interesting fact that a double pericardial friction sound was heard at the base of the heart the day before death, and that after death a churned mass of fibrinous filaments and blood was found occupying this situation. This case plainly shows that hæmorrhage slowly taking place into the pericardium, as from an aneurism, may give rise to a pseudo-friction sound. In one case the ulceration took place on old-standing valvular disease; in the other it immediately supervened on the rheumatic endocarditis. Some writer has insisted that in ulcerative endocarditis an important diagnostic sign is that the physical signs may show the valvular lesions to be rapidly progressive; this was well observed in the first case, in which an obstructive basic bruit soon became double. The presence of ear symptoms in both cases is striking—tinnitus in one, and deafness in the other. I must acknowledge the courtesy of Dr. Hunt in placing these cases at my disposal for publication.

Reviews and Notices of Books.

On the Pathology of Bronchitis, Catarrhal Pneumonia, Tubercle, and Allied Lesions of the Human Lung. By D. J. HAMILTON, M.B., F.R.C.S.E., F.R.S.E., Professor of Pathological Anatomy (Sir Erasmus Wilson's Chair), University of Aberdeen. London: Macmillan and Co. 1883.

WE are glad to find that Professor Hamilton has thought fit to collect within this volume the very interesting and thorough series of papers which he contributed to the pages of *The Practitioner* a short time ago, and, with needful additions, to have placed before the profession a work which we hope will be widely read and studied. It contains the outcome of extended original observation, and although in some respects it may seem to run counter to the tendencies of modern pathology, no one can deny the ability with which the author handles the problems arising out of this study. The chapters devoted to bronchitis and the diseases frequently associated with it fill a gap in pathological histology which has never been so adequately dealt with before. After describing in detail the normal structure and disposition of the bronchial passages, and the manner in which the epithelial lining is reproduced, he applies this knowledge to the explanation of the changes observed in acute bronchitis, laying great stress upon the presence of the basement membrane as preventing the catarrhal process from being, as some hold, in part due to proliferation of connective tissue corpuscles. The cellular products of catarrh are, he maintains, entirely derived from the layer of germinating epithelium. There are evidences of concomitant leucocytal infiltration of the inner fibrous coat of the bronchus and of the lymphatic structures, but there is no proof that these exuded leucocytes travel beyond the barrier afforded by the basement membrane. Another interesting fact is the state of congestion of the nervous ganglia at the root of the lung, suggestive of their taking part in the increased activity of the bronchial glands. Descriptions follow of the changes observed in chronic bronchitis, as occurring in an acute attack, in valvular lesion of the heart, from inhalation of foreign matters &c., and then comes an important section upon chronic interstitial pneumonia as a complication of bronchitis, in which the author gives his adhesion to the doctrine that bronchiectasis is due to the contraction of the thickened lobular septa passing between the bronchial wall and the pleura.

It is, however, in the second half of the work that Professor Hamilton enters upon controversial ground, and the bald statement that he does not consider ordinary croupous pneumonia to be an inflammatory process at all, may sound strangely to those unacquainted with the arguments he proffers. The fact is he does not acknowledge that the vascular changes in the process of inflammation are, strictly speaking, "inflammatory"; the exudation of liquor sanguinis and the emigration of leucocytes are, he considers, purely the mechanical effects of suddenly increased blood-pressure, and the pneumonic exudations being solely composed of blood-constituents is, he thinks, brought about by the sudden change in the condition of the pulmonary circulation, the primary cause of the heightening of blood-pressure being stagnation in the capillaries, due to spasm of the bronchial and pulmonary vessels from irritation of the alveolar walls. This subject is discussed at some length, but it does seem as if far too much importance was assigned to these mechanical conditions. Professor Hamilton, in pursuing his arguments to their logical conclusion, and in advocating venesection as "the one sovereign remedy" in acute pneumonia, says:—"I cannot refrain from expressing my strong conviction that in venesection we have the one means of lowering the blood-pressure and cutting short the disease. Once the undue blood-pressure has been relieved, the exudation of its solid constituents must cease, and time will thus be afforded for the circulation in the part to recover itself. The hard, wiry pulse of a person suffering from croupous pneumonia simply expresses the high tension of the blood. Remove part of the latter and relieve this tension, and you will cut short the disease." And he thinks that venesection has been discredited because it has been employed for cases of catarrhal as well as of croupous pneumonia, an assumption almost as gratuitous as the foregoing statements upon its value in the latter disease. Pathologically Professor Hamilton sees no difference between "croupous pneumonia" and "œdema" and "brown induration" of the lung, except in the rapidity with which the increase of blood-pressure takes place; and he regards "catarrhal pneumonia" to be the real *inflammatory* disease of the lung. The chapters on catarrhal pneumonia naturally lead to the discussion of tubercle and phthisis. The view taken by the author here is much the same as that promulgated by Virchow, but which is now on all sides giving way before the reversion to the modified doctrine of Laennec. Tubercle, according to the author, is a connective-tissue tumour, analogous to sarcoma, but evoked by infection from the absorption of caseous products. The giant-cells are only so far characteristic as indicating the reversion of the irritated connective tissue to its embryonic type. Tubercle may be disseminated embolically, but he finds no ground for the belief that it primarily precedes the inflammatory changes so often associated with it in the lung. It is impossible, and it would be unfair, to attempt to give an accurate idea of Professor Hamilton's teaching within the small space at our disposal. We must refer to the work itself for this, and for his views on the supposed contagiousness of phthisis, to which the discovery of the bacillus has given such a stimulus. Professor

Hamilton does not believe much in the constitutional nature of phthisis, but rather in a liability from internal weakness or from mal-hygienic surroundings, to catarrhal pneumonia, which, on reaching the caseous stage, may become the source of the tubercular virus, capable of transmission. He does not, however, believe that the secretions, &c., contain this virus. We commend this work for careful study. The reader will find it pleasant to peruse, and profitable, too, for it bears the impress of convictions based upon careful observations. It is amply and beautifully illustrated, and the printing is unexceptionable.

Analytical Records.

HOLYWELL FRUIT CHAMPAGNES.

(CAMERON & CO., HOLYWELL-ROW, FINSBURY.)

WE are glad to find that the best manufacturers of aerated drinks are taking to the use of distilled water. The London water-supply, although better than that of many places, is by no means satisfactory, and its imperfections have once more been alluded to by Dr. Buchanan in his recent circular. We have analysed the water used by Messrs. Cameron in their manufacture, and find it to be, as described, pure distilled water. The beverages they prepare with it are delicately flavoured with various fruits, and will be highly popular, not only with total abstainers and children, but with many moderate drinkers.

FLETCHER'S SYRUPS OF THE HYDROBROMATES.

(FLETCHER, FLETCHER, & STEVENSON, HOLLOWAY.)

We noticed some time ago, with approval, Messrs. Fletcher's concentrated liquors, which are now, we believe, extensively used. We have now to draw attention to their hydrobromate syrups, which appear to us quite as satisfactory as the liquors. The two forms are syr. ferri et quiniæ hydrobrom., and syr. ferri et quiniæ et strychniæ hydrobrom.

KHOOSH TONIC BITTERS.

(KHOOSH TONIC BITTERS CO., 24, KING WILLIAM-STREET, E.C.)

The basis of this bitter is said to be a drug much used in India. It is a clean-tasting, pleasant, and, although a powerful bitter, distinctly different from, although analogous to, quinine. Its use in England will, we fancy, be pretty much a matter of taste.

SANITARY ROSE POWDER. FOR NURSERY AND TOILET USE.

(J. WOOLLEY, SONS, & CO., MANCHESTER.)

This is quite unlike any toilet powder we have met with before. It is a fine, white powder, freely soluble in water, almost absolutely neutral to test-paper, and is antiseptic and mildly astringent in character. We find no noxious constituent in it, and as it may be removed simply by washing, it promises well for nursery use. We shall be glad to hear of it again, when more extensive experience has been obtained as to its use, and meantime are inclined to think very favourably of it.

PALM COTTON DRESSING.

Mr. Hartley, of Norfolk-street, Strand, has introduced to our notice a dressing invented by him under the name of "palm cotton." It is prepared in thin sheets, and is a smooth, soft, absorbent material, well adapted for use as a substitute for lint in the application of lotions and ointments.

BEQUESTS.—The will of Mr. Thos. Garfit, late M.P. for Lincolnshire, contains bequests to the following medical charities:—Lincoln and County Hospital, £200; Boston Dispensary, £100; Boston Cottage Hospital, £100; Louth Hospital and Dispensary, £100; Horncastle Dispensary, £100; and Mablethorpe Convalescent Home, £100.

REPORT
OF
The Lancet Special Sanitary Commission
ON
PROBABLE CHOLERA CENTRES IN LONDON.

IN spite of notable improvements, many efforts, and innumerable protestations, a dark corner may be found in every quarter of London, where if the cholera germs were once introduced they could easily take root. On the other hand, the danger that now menaces us may help those who have been anxiously striving to mend these weak points in our armour; and certainly throughout London the local authorities are displaying notable and praiseworthy activity. They cannot, however, reach a better class of houses, which are often in a more dangerous condition than many of the dwellings of the extreme poor. In this respect the action of the local authorities requires strengthening, otherwise we may find the cholera attack not merely what remains of the old "slums" or rookeries of the metropolis, but also many terraces, streets, and crescents of middle-class houses, with porticos and balconies, French windows, and even dados and "awfully utter" furniture. We would specially denounce the practice of building whole rows of houses all after the same pattern and on the same cheap scale. The rents may vary from £40 to £70 a year, and the houses would seem to be very salubrious and "desirable" residences to all who have not technical knowledge of sanitary matters. On examination, however, it will very frequently be found that the lead pipes from the sinks, &c., are not trapped.

In a number of houses of this description that we recently visited in Chelsea, Pimlico, and Marylebone, we found that the closets were not only faulty in construction, but altogether devoid of proper ventilation. In Pimlico we saw some houses with the closets built under the staircase, with no window whatsoever, and therefore ventilating into the hall and passage. The house drains were not disconnected from the street sewer; they were not ventilated; there was consequently no protection for the inmates. Unfortunately, there is no organisation ready that would ensure thorough inspection of such houses. The sanitary staff of each locality have already enough work to do in watching the worse districts and attending to houses where fevers have actually broken out. Individual initiative and voluntary effort must be called upon to assist in this indispensable work.

If the cholera may be conveyed to the better class of houses through defective drainage, the epidemic will naturally follow its usual course by attacking more severely the over-crowded districts where poverty and dirt abound. These quarters, in spite of the immense improvements achieved during recent years, are still dangerously numerous. We cannot attempt to describe all these likely centres, but will draw attention to one or two typical quarters. Thus, in Marylebone there still remains intact Horace-street, formerly known as Cato-street, renowned for its Irish riots. The old, miserable, and overcrowded houses of this street are a disgrace to modern civilisation. Two or three have been condemned, but they are still untouched, and the whole street should come down. On entering these repulsive habitations we found overcrowding and dirt the rule. At one house there was no water to the closet, the pipe having been broken and torn away; while at another the trap was shattered to pieces and the soil was accumulating under the seat, being unable to reach the drain-pipe. Fæcal matter was bespattered on the ground, the pavement was incomplete, slops carelessly poured over a gully sank into the earth, and the dustbins, unemptied, contained stinking vegetable and animal matter, over which eagerly clustered innumerable flies. Little children, half naked, sprawled over the filth, while the parents, with whom we conversed, displayed the most complete ignorance as to the dangers they were

incurring. Edward's-place, in the same district, was equally offensive, but one side of the court has now been pulled down, so that the few remaining house have, at least, more air. It is under Torrens's Act that these improvements are being accomplished, but the process is a slow one; and the question arises whether, in view of a possible cholera epidemic, a plea of urgency might not be brought forward.

In the east, as in the west, the same incompleteness of reform may be noticed. We were naturally attracted to St. George's-in-the-East by the rumours, happily unfounded, of a case of cholera in the London Docks. Here we found that Dr. Rygate, the medical officer of health, had scheduled three districts to be rebuilt; but power to carry out improvements had been obtained only in respect to one of the three. This is known as the tenth street area, and is situated by the side of Anchor-and-Hope Alley, close to the Thames. About 1500 of the lowest and poorest labourers live on this spot, and will shortly be dispossessed; but the improvement will not be accomplished in time to save the district from a possible epidemic of cholera. The danger here will be particularly great should the Thames become contaminated, for many of the houses are below high-water mark. The other districts that are to remain intact, Bluegate-fields and London-terrace, though not large, are still a menace to both public health and public peace. The latter especially affords easy means of escape to criminals pursued by the police. Poverty, overcrowding, and dirt are natural in such miserable tenements. The churchyard of St. George's-in-the-East has been converted into an admirable public garden—an oasis of sweet-scented flowers, of quiet and peace, amid unequalled squalor and misery. But to complete the work this garden should have been prolonged a few yards further eastwards till it reached the street that divides St. George's from Shadwell. This would have cut right through the heart of Bluegate-fields, and let light and hope down upon this ill-famed and notorious slum.

In the Docks the water is not renewed so often as to be considered absolutely safe. During the former cholera epidemics, and before the main-drainage scheme had been carried out, it was stated that the water in the Docks was purer than that of the Thames, as the supply was obtained only at high tide. Now the comparison must be the other way; and we would urge renewed care in cleansing and in changing more frequently and thoroughly the water of the Docks.

From St. George's-in-the-East we proceeded to visit the Italian colony on Saffron-hill, deeming that, as these foreigners are specially ignorant of sanitary matters, they would be most rebellious against any effort at reform. In this we were not mistaken. The opening out of Liquorpond-street has cleared away some bad houses, but the greater part of the courts and alleys where the organ-grinders and penny ice sellers live huddled together still exist in all their pristine dirt and disorder. Throughout this thickly populated district the closets are in a filthy and dangerous condition. This is due to the simple fact that the Italians cannot be persuaded to use English closets in the English manner, and no one has thought of constructing closets suited to foreign habits. A part of the liquid matter runs off into the yard and the rest percolates through the wooden boards. The ground is therefore thoroughly contaminated, particularly as the few rough stones or bricks in the yards cannot be considered as pavement. To the wet from the closets must be added the wet of the spilt slops and the vegetable and other matter from the dustbins. Immediately above, close by the closets and dustbins, is the tank that supplies the drinking water, and also flushes the drains, where the drains are flushed, which is not the case in all the houses. Now, it is in these yards, in this atmosphere of filth, of sewage and organic matter in decomposition, that the eggs are broken and beaten up; that the milk in uncovered vessels is mixed with the sugar, the vanilla, the flour, &c., and then frozen and converted into the cheap ices which the Italians sell in all parts of London. Some of these men drag their barrows to a distance of ten or twelve miles, and come back every evening to sleep and make a fresh provision of ices in this most unwholesome quarter.

The simplest method of meeting this difficulty would be to construct closets in the continental style. The floor should be cemented and water-tight, inclining towards the pan, and a little opening made for all liquids to drain away above the trap into the soil pipe. A water-tight stone or cement seat only a few inches high, with an ordinary pan and syphon, should be provided. On this the men could stand. For a small consideration, a few individuals could be engaged to sluice the floor and seat every day with several bucketsful of water, to which a disinfectant might be added in times of epidemics. This would not be ideal sanitation, but simply a rough and ready improvement on the present utterly abortive attempts to make foreigners appreciate an English closet. Within, the houses are overcrowded and crumbling; the damp comes through the ceilings and the walls, and, in spite of the absolute illegality of the proceeding, some of the cellars are inhabited. In one cellar we found an English woman, who had married an Italian, living with her husband and two children. The room was scarcely seven feet high, and measured about six yards by four. A grating on the street pavement admitted a feeble light; the floor and walls were damp, the atmosphere stifling and foul. This room was under the front part of the house, while the cellar behind it was used as a sort of washhouse. Here there was no floor, a few bricks barely protected the feet from the bare earth. A drain in the centre emitted strong whiffs of sewer-gas. There were stagnant pools of dirty water on all sides. We should imagine that a cat or a dog could not live in such a place; yet it was the home of two bright little children, their father, and mother—a woman who, to judge from her delicate and refined face, deserved a better fate.

This district should be visited at night, as it is then, and then only, that the overcrowding can be appreciated to its full extent. The Italians have some knowledge of the law and are skilled in avoiding its consequences. Nevertheless, on a previous occasion we discovered a small room with four double beds in it. From the landlord we obtained the confession that the men and women who slept in these beds were in nowise related to each other, and only one bed out of the four had but a single occupant. Many inhabitants complained that the dust was not removed frequently, and the rents in proportion to the accommodation were so exorbitantly high that we are not surprised at the overcrowding. But this quarter is a danger to the whole community, particularly as its inhabitants daily and systematically travel to every part of London, selling ices made with substances that most readily absorb the impurities floating in the surrounding atmosphere. We were glad to note, however, some special activity has been displayed during the last few weeks. A far larger quantity of disinfectants have been used than usual, some new pans have been substituted for old and broken ones, and the whitewash brush has been vigorously applied; but measures of a far more radical description must be adopted before any real effective result can be attained.

In Chelsea, on the other hand, we found that the prevalent anxiety with respect to the approach of cholera had failed to arouse the local authorities. The sanitary work of the borough proceeds in its usual jog-trot manner as if the district was as perfect and as pure as could be desired. On our protesting that the neighbourhood of Turk's-row had a very bad reputation, we were told that in five years the leases would be exhausted, and then the old houses would probably be pulled down; a fact that will scarcely console those who fear cholera during the coming autumn. Again, when we alluded to the unsatisfactory drainage of the better-class houses, it was urged, in reply, that if people of means and education are foolish enough not to set their houses in order they must bear the consequences. Unfortunately, wealth and education do not of necessity imply a knowledge of sanitary engineering; and we have known architects, builders, and even medical men who, from want of technical knowledge, lived in houses which they deemed to be perfectly wholesome, but which, on investigation, were found to be not exempt from infiltrations of sewer-gas. We maintain, therefore, that the better-class houses have for too long been neglected, and trust that the inspection of these as well as of the poorer dwellings will not be neglected. If, however, sanitary action in Chelsea is to be limited to the poor quarters, what shall we say of such places as Oakham-street and Wickham-court? It was not so long ago that typhus fever raged in this wretched quarter. This should have sufficed to justify stringent measures. Within the last few weeks there have been many cases of bad diarrhœa; and we visited a house close by where a death from choleraic diarrhœa had just taken place. Here, in spite of repairs, the closet was without water; and there was a very objectionable gully in the yard. All along Oakham-street the catch-pits leading from the gutter to the sewer were filled with slop-water and vegetable refuse, which remain stagnant and in consider-

able volume for many hours. The closets are in small yards behind the houses. We did not find water in any of them. The drinking-water was always close at hand, stored in buckets or cisterns that were unprotected from the dust and effluvia of closet, dusthole, and the drain into which the slops are emptied. This drain is often stopped up, and the slops form pools in the yard and gradually sink into the earth. Thus, for instance, on entering one house we found the closet smashed and filth accumulating. The dustbin, we were assured, had not been cleared for a fortnight, and its appearance did not belie this assertion. At the next house there was no water in the closet, though the cistern was behind the closet, and consisted in part of the closet wall. The water filtered through the bricks, leaving a green deposit on the closet wall. As air can pass through a porous wall with greater facility than water, the closet atmosphere would reach the cistern through the wall as well as by the door. Here, also, the court wanted paving and the dust removing.

At this point Wickham-place joins Oakham-street, and is even worse than the former thoroughfare. At the corner house we found a filthy closet, with the pipe broken and blocked up with fæcal matter. Next to it stood the water-butt, where the drinking water was so foul that the inhabitants of the house assured us they had seen large animals crawling and swimming at the bottom. They had now ceased drinking this water, prefering to take the trouble of going next door for their supply. The water was so corrupt that even the small quantity held in a tumbler appeared to be of a dull yellow colour. The tap was missing from the butt, so that the water was taken out by dipping jugs into it; and the butt was never thoroughly cleared. This must account for its exceptional colour. At the foot of the butt the drain used to carry away the slop-water was also stopped up; the yard was therefore studded with deep pools of slop-water, some of them evidently containing a large proportion of urine. The odour was sickening, especially when, by a slip of the foot, these pools of foul water were stirred up. The house overlooking this slough seemed overflowing with a poverty-stricken haggard population; everything looked black and dirty, and it is not often we have contemplated a more depressing scene. We entered nearly all the other houses in Wickham-place, and in no case did we find water in any of the closets; but starting from the pan an inch-pipe went straight through the wall into the upper part of the cistern. Originally these pipes were evidently meant as overflow-pipes from the cistern to the closet, but must have brought back any amount of sewer-gas to the cistern. This would still be the case but for a cork inserted in the pipes. In two cases, however, the cork had either been pushed very far up the pipe, or was not there at all, while in others the cork was sticking out so prominently that it could be easily pulled out by some mischievous boy. These absurd and dangerous pipes, having been condemned, should have been removed instead of leaving the health of the people at the mercy of a cork.

We could give many other similar instances of closets with broken pans or traps and fæcal matter accumulating both under and upon the seat, of slops fermenting in pools round a blocked gully, of unemptied and foul dustbins, and of unprotected cisterns that contain the drinking-water, standing as near as possible to these sources of contamination. Surely it is not too much to ask for the immediate remedy of such palpable grievances. Each court, each alley, to which this description applies, may and probably would become a centre for the propagation of cholera.

Apart from the condition of special districts, we receive many general complaints concerning, for instance, the *laches* of the St. Pancras scavengers or the neglect of the River Company in allowing the water in the ponds to fall too low. We are also told of dreadful smells in the Broadway, Westminster, especially on Sunday nights, emanating from fishmongers' shops and slaughter-houses; while the entire condition of street markets opens out a vast question affecting public health. The state of the canals must also be investigated; though in this respect Mr. Wynter Blyth is to be congratulated for having worked effectively towards purifying that portion of the Regent's Canal passing through the district of which he is the medical officer. Altogether, therefore, it will be seen that there remains much to be done. We are better prepared than formerly. The abuses are not so numerous, and the laws of health are better taught and understood, but there is yet ample room for improvement, and there are many dark and dangerous corners that may still become plague-spots if immediate action be not taken.

METROPOLITAN HOSPITAL SUNDAY FUND.

A MEETING of the Council of the Hospital Sunday Fund was held on Monday, at the Mansion House, for the purpose of distributing the amount collected on Hospital Sunday at the various churches and chapels in the metropolis among the hospitals and dispensaries. Alderman Sir Sydney H. Waterlow, M.P., presided.

The Report of the Distribution Committee stated that the total amount available for distribution, after allowing sufficiently for liabilities and the usual current expenses, was £32,243; of which they recommended the payment of £29,664 to ninety-seven hospitals, including six institutions which might be classed as hospitals, and £2579 to fifty-one dispensaries. In addition 4 per cent. of the total sum collected, amounting to £1400, was set aside for the purchase of surgical appliances. The institutions participating were three more than last year, and forty-three more than in the first year of the fund.

The awards recommended by the Committee included the following:—*General Hospitals:* Charing-cross, West Strand, W.C., £731 5*s.*; French, Lisle-street, W.C., £230 12*s.* 6*d.*; German, Dalston-lane, E., £731 5*s.*; Great Northern, Caledonian-road, N., £225; King's College, Lincoln's-inn-fields, W.C., £1462 10*s.*; London, Whitechapel, E., £3011 15*s.*; Metropolitan Free, Commercial-street, E., £281 5*s.*; Poplar, East India-road, E., £315; Royal Free, Gray's-inn-road, W.C., £450; St. George's, Hyde-park-corner, S.W., £1677; SS. John and Elizabeth, Great Ormond-street, W.C., £123 15*s.*; St. Mary's, Paddington, W., £1065 3*s.*; Seamen's, Greenwich, S.E., £787 10*s.*; the Middlesex, Charles-street, W., £1518 15*s.*; Tottenham Training Hospital, Tottenham, N., £223 15*s.* 11*d.*; University College, Gower-street, W.C., £1004 4*s.*; West London, Hammersmith, W., £309 7*s.* 6*d.*; Westminster, Broad Sanctuary, S.W., £900. *Special Hospitals:* City of London Hospital for Diseases of the Chest, Victoria-park, E., £731 5*s.*; Hospital for Consumption, Brompton, S.W., £1250; North London Consumption Hospital, Hampstead, £257 17*s.*; Royal Hospital for Diseases of the Chest, City-road, £225; and Royal National Hospital for Consumption, Ventnor, £337 10*s.*

Bishop CLAUGHTON moved that the report of the Distribution Committee be approved, and the several awards paid.

Sir EDMUND CURRIE, in seconding the resolution, said, while the hospitals and dispensaries would doubtless be very grateful for the aid rendered them, the amount of £30,000 was hardly representative of the vast wealth of the Metropolis, especially when they recollected that from one church alone (Canon Fleming's) £1000 was received.

The motion was then put and carried.

Dr. WAKLEY, in moving a vote of thanks to the Committee of Distribution, urged that legacies towards the fund ought to be more earnestly encouraged, and that if the medical profession and the public were to enforce among patients and friends the wisdom of leaving money to that fund, to be properly distributed among the hospitals and dispensaries, great good would result.

The Rev. DANIEL MOORE seconded the resolution, which was carried.

Sir SYDNEY WATERLOW, in replying to it, said he believed the Fund had done great good in the eleven years in which it had been in operation, not only in dividing the £350,000 among the medical charities, but in effecting improvements in the economical management and the general efficiency of the various institutions. When the Fund was first started they had forty-three fewer institutions to divide the proceeds amongst than they had now, and that fact should be remembered by the charitable public. The Committee had been sorry to allude to the circumstance that in one church (if not more) only part of the collection had been sent in to the Fund. Not much harm had been done at present; but the Committee did not wish the practice to grow, and they would appeal to the clergy to devote the entire collection on Hospital Sunday to the Fund.

On the motion of the Rev. Canon SPENCE, seconded by Bishop CLAUGHTON, the cordial thanks of the Council were tendered to the Lord Mayor for the energy and ability which he, as the President and Treasurer, had shown in promoting the success of the Fund and in securing to the Council the largest amount that they had ever been able to distribute in any one year since the Fund was started. With that the meeting separated.

THE LANCET.

LONDON: SATURDAY, AUGUST 4, 1883.

THE deputation which waited on Mr. MUNDELLA on Wednesday last was almost wholly favourable to the Medical Bill. The representations made to the Vice-President of the Committee of Education will be gathered from a report elsewhere. The main object of the deputation was to demand from the Government an adherence to that constitution of the Divisional Board for Scotland which gives to the northern Universities a decided preponderance over the Corporations. The deputation consisted of medical graduates of the Universities of Scotland. It was introduced by Sir LYON PLAYFAIR, and the spokesmen were Dr. DYCE DUCKWORTH, Sir ANDREW CLARK, and Dr. SPENCER COBBOLD. The fact that the graduates of Scotch Universities have been so quiet and so long in speaking will no longer be construed to mean that they are careless about this Bill and about the bearing of it on the fame of Scottish qualifications. Many members of the deputation not only hold Scotch degrees, but qualifications from the Corporations of Scotland, and it is of no slight consequence to them whether precautions be taken in the impending legislation to remove that stigma which has been fastened on some of the qualifications of Scotland, and which must attach to them until some provision is secured for removing it. These gentlemen believe that this provision will be found in such a composition of the Divisional Board for Scotland as will give the Universities a decided ascendancy over the Corporations, coupled with a Medical Council in which the individual representation of Examining and Educating Bodies shall no longer obtain. The Government in their Bill propose to remove not only a great injustice, but a great absurdity. Since 1858 the great Universities of Scotland have been represented by only two members in the Medical Council. In other words, the representation has been a joint one. All this time the Corporations of Scotland have each had a representative to themselves. This absurd state of matters is apparent to everyone but to the official cliques which rule the Scotch Corporations. That the Government should see the absurdity is inevitable, and that any Scotch member should seriously complain of the Government for trying to remedy it, and for giving the great Universities of Scotland more control over the general medical education and examination arrangements of the country, is almost incredible. The able statement of Dr. DUCKWORTH on behalf of the deputation will, at any rate, leave no doubt in the mind of the Government as to the feeling of the Scotch graduates practising in London, and who can have no selfish interests to serve by their action in this matter. Sir ANDREW CLARK did great service in bringing under Mr. MUNDELLA'S notice, in earnest words, the misfortune of that mutilation—we must say that mysterious mutilation—of the Bill which is implied in the removal of Clause 27, providing for the registration of higher titles—that is, titles, in the opinion of the Medical Council, implying a higher education and examination than those implied on passing the minimum examination. If this can be re-inserted we venture to say that it would immensely tend to stimulate medical education, and to enlighten the public on the value of many misleading titles—two of the great objects of all medical legislation. It was most gratifying to notice Mr. MUNDELLA'S hearty concurrence with the deputation, and his determination to do all in his power to terminate during this session the unsettlement and suspense of the medical schools and examining bodies of the country.

THE literature of Tuberculosis is amongst the most extensive of any subject in medical science, and since KOCH'S discovery of the bacillus contributions to this special department have multiplied at a very rapid rate. The latest and in some respects the most instructive of these essays is contributed by Dr. RIBBERT of Bonn to the last number of the *Deutsche Medizinische Wochenschrift*, and it consists in a briefly summarised account of some investigations into the pathological anatomy of the tuberculosis of fowls, particularly with reference to the presence of bacilli in the tubercular formations. In the presence of the doubt which still prevails in some quarters respecting the identity of bovine and human tuberculosis—a doubt which is in a fair way of being dispelled if KOCH'S bacillus is to be taken as the criterion of true tuberculosis—it will excite some surprise and perhaps some consternation to learn that a disease which] occasionally ravages the poultry-yard is characterised by the same micro-organism. If Dr. RIBBERT'S observations be confirmed in every particular, our ideas concerning tuberculosis will require to be still further extended, and another possible source of infection through food will have to be admitted. For our own part we do not desire to press this suggestion too far, and will be contented with giving an account of Dr. RIBBERT'S research.

Tuberculosis had been unusually prevalent among poultry in Cologne and the neighbourhood, so he had ample material to examine. He found the characteristic changes most marked in the intestinal tract, the liver, and the spleen. In the intestine there were beneath the serous coat nodules varying in size from a pin's head to a walnut, the smaller ones projecting beneath the mucous membrane, which was puckered in a scar-like manner over the surface of the larger masses. On section these growths presented much casecation. The foci in the liver and spleen were some of them almost microscopic, others varying in size up to that of a cherry, the larger nodules being caseous in the centre. Occasionally similar nodules occurred scattered through the lungs and kidneys. All these tubercles were the seat of bacilli in great numbers, generally massed together in groups, and so abundant that in the stained sections their presence could be detected with the unaided eye. Their disposition in the nodules was peculiar. Thus in the very small hepatic nodules the bacilli were collected in the centre, the periphery being composed of inflammatory tissue. The nodules next in size presented an area in the centre partly caseous and wholly free from bacilli, which were grouped in a zone outside this. In the largest tubercles it was possible to distinguish four zones—viz., a central caseous mass, a zone of tubercular cells free from bacilli, then the bacilliferous zone, and lastly the outer zone of inflammatory tissue. It would

appear as if with the growth of the nodule the bacilliferous zone continued to extend its area, and that caseation occurred, not from the direct action of the bacilli, but from the shutting off of the blood supply.

Perhaps the most interesting fact that comes out of Dr. RIBBERT'S work consists in the observed relation of the bacilli to the bloodvessels, particularly of the lungs, where the indurated vascularised areas surrounding caseating tubercle yielded on examination the following facts. The parallel bundles of connective tissue forming the walls of the veins were seen to be thickly invaded by the bacillus, which occurred in irregularly shaped masses, in places encroaching upon the lining membrane of the vessel, the bulging of which produced the appearance of minute tubercles, and rendered thrombosis probable. The bacilli were specially massed within the mesh-like spaces of the connective tissue forming the vessel wall. Caseation was not to be found in these structures, and the arterial walls were similarly invaded by the bacillus. It is suggested that, if the same invasion of the bloodvessels occur in the human subject, we may not have to go far to seek for an explanation of that rather inexplicable occurrence in the history of pulmonary phthisis—viz., early hæmoptysis. The vessel wall, weakened by the invasion of the micro-organism, yields before the blood-stream and gives rise to the hæmorrhage, and the discovery by HILLER of bacilli in the sputa of cases of this initial hæmoptysis seems to support the inference, which, however, should not as yet be allowed to go beyond the region of hypothesis. More plausible is the other inference which Dr. RIBBERT deduces from this involvement of the veins—viz., the facility with which a general tubercular infection may arise secondarily. He is careful to point out that there is no question here of any special form of new growth in the vessel wall; but the essential feature is the presence of bacilli in situations admirably calculated to ensure their entrance into the circulation.

A few remarks upon the character of the tuberculosis of fowls conclude his suggestive paper. The large size and advanced character of the intestinal nodules point to the alimentary canal as the primary seat of the disease, the liver and other organs being secondarily infected. It is easy to infer from this that an epidemic of tuberculosis in the poultry-yard may arise through feeding, the excreta of the fowl affording the virus. But this hypothesis has not received direct confirmation. Dr. RIBBERT has not found bacilli in the excreta examined, nor was he able to induce tuberculosis in two fowls with whose food excreta from tuberculous fowls were mixed. On the other hand, he succeeded in inoculating fowls with tubercle by the introduction into the abdominal cavity of portions of the intestinal nodules. The inoculated tubercle, it may be remarked, did not occur in the intestine, but only in the spleen and liver, nor did it present many bacilli. Inconclusive as this part of the research appears to be, it opens up a new field of research, which we trust pathologists will not be slow in following up. It shows, further, how much may be gained from comparative pathology upon this most interesting subject of modern research.

SIR HENRY PEEK, Bart., is one of those large-hearted men who find their highest pleasure in benefiting whole classes of the population, and who work hard in private to secure the success of any enterprise they undertake. With his well-known acumen he has struck right down at the root of the so-called "overwork" question, and recognised—we might almost say discovered—the real efficient cause of the evil while other philanthropists not less interested or in earnest, but not so practical, have been lopping with sensational vigour at the topmost branches. Sir HENRY PEEK, looking with a keen business eye into the condition of the scholars of a national school of which he is patron, has perceived that they are, as a rule, underfed. Unfortunately this is *the* cause of the educational difficulty throughout the country. Children are generally "better clothed," as the phrase goes, than they were twenty or thirty years ago, but they are not properly or adequately fed. Social reform has been very much a whitening of sepulchres as regards the poorer classes. Police regulations have compelled parents to spend more money on the clothing of their children, but it has done nothing to improve the quality or to increase the quantity of their food. They look more respectable, according to our conventional notion of what constitutes "respectability," but they are just as hungry as, and therefore not happier than, they were before society, in one of its hyper-philanthropic moods, took their condition seriously in hand.

The Education system is *not* overworking children, but it is demonstrating that they are underfed. It would, indeed, be a boon to the country if all school patrons were as astute as Sir HENRY PEEK, and withal as sagacious in finding a remedy for the evils they discover. With admirable tact Sir HENRY has devised a system of cheap dinners for children. The parents pay five pence for five dinners in each week, so that they are not pauperised or released from their responsibility; and for this small sum the children have an excellent midday meal. It is needless to say that the "attendance" at school is found to be well-maintained, and the children are better, healthier, and happier than the children of other schools. This is a movement so praiseworthy that we cannot allude to it except in terms of warmest approval. We do not hesitate to affirm that Sir HENRY PEEK has shown school managers generally how to cut the Gordian knot of the education question. Do not reduce the number or difficulty of the lessons, but increase the quantity and improve the quality of the food.

That good feeding is necessary for brain-nutrition does not need to be demonstrated, or even argued at length. The brain is part of the body, and—referring to our recent remarks on "Overwork in Connexion with Education,"—it must be evident that the position in which education places the brains of underfed children is that of a highly exercised organ urgently requiring food and finding none, or very little. These children are *growing*, and all or nearly all the food they can get is appropriated by the grosser and bulkier parts of the body to the starvation of the brain. If their brains were not stimulated by intellectual work they would be simply left undeveloped. As it is they struggle for food with the other organs of the body, and every part of the organism is reduced to a condition favourable to disease. Other things being equal, a growing child with a hungry brain is worse off both in mind and body than a dullard. If the organ of mind were not at work it would not be so urgent

in its demand for food, and even a poorly fed child might grow in body generally; but being mentally active and underfed it can neither be healthy in brain nor in muscle. This is a matter of great moment, and ought to be carefully considered by all who have the care of the young. It is cruel to educate a growing child unless you are also prepared to feed him. Brain-nutrition makes a larger demand on the supplies than general nutrition, and it requires that its special needs shall be satisfied immediately. This is why fish is so useful to brain workers, because it is completely digested in less time and with less trouble to the stomach than most other articles of food. Children are generally provided with excellent powers of digestion and assimilation, but these faculties are useless without food. Children who are not adequately supplied with nourishment soon begin to look exceptionally sickly if they are made to work with their heads, whereas if only working with their bodies they may be fairly well on comparatively little.

SINCE the announcement of the withdrawal of the Government Bill on the 26th ult. several questions have been put to the Secretaries of State for War and the Home Department in reference to the unsatisfactory method in which these Acts are working since compulsory examination is no longer enforced and the special police have been withdrawn. The intentions of the Government to remain quite passive are made clear by the final answer of the Marquis of HARTINGTON: "Until we have had further experience of the present system I do not propose to do anything." Sir W. HARCOURT can give no opinion as to whether local authorities could employ the local police in carrying out the Acts, although doubts as to this point exist among the local authorities in the various districts under the Acts. The Home Secretary is clear that the metropolitan police are too much employed elsewhere than in the metropolis; but we should like to know whether he considers that a few men are less usefully employed in protecting the health of our naval and military forces, and in repressing prostitution and juvenile immorality in garrison towns, than a division in keeping order at race meetings and other similar gatherings. The experience which the Secretary of State for War requires is rapidly accumulating, as is shown by the questions that were put to him on the 30th and by his answer. An increase in the unprotected districts last year, whilst the ratio in the protected districts remained stationary, followed by an admission in the ten weeks since the alteration in the Acts of 184 patients with venereal diseases into the Military Hospital, Stoke, against 118 in ten weeks a year ago, and of 100 into the Naval Hospital at Stonehouse against 45, must make the disastrous consequences of the repeal of the compulsory clauses apparent to everyone. Voluntary submission has resulted in 30 admissions to the Female Lock Hospital in Devonport, against 130 when compulsory examination was in force. The return of soldiers from Egypt and foreign service will not explain the increase in the Naval Hospital, nor the diminution in the number of occupants of the Female Lock wards. Mr. HOPWOOD—who perhaps, next to Mr. STANSFELD, is most responsible for the resolution of the House of Commons—asks if the number of these diseases among the troops had not risen between 1877 and 1880 from 33 to 74 per 1000? Mr. HOPWOOD omitted to state that in 1878 the Reserves were called out and in 1879 Lord CARDWELL'S order stopping the pay of a soldier with venereal disease was cancelled, and that these at once explain the rise. This is only another illustration of the means by which the opponents of the Acts seek to influence those who have not carefully studied the statistics of the question. Lord HARTINGTON'S suggestion of a serious wave of disease is an unnecessary hypothesis when the consequences of the revocation of Lord CARDWELL'S order are considered. We hope that the local authorities will take every step to arrest the mischievous consequences of the present do-nothing system, and, if they can legally do so, employ the local police in abating the evils which if allowed full sway will soon bring back to some of these garrison towns their old notoriety for flagrant immorality and vice.

Annotations.

"Ne quid nimis."

CAMBRIDGE MEDICAL SCHOOL.

THE change which has lately been made in transferring Professor Humphry from the chair of Anatomy to that of Surgery has supplied the remaining deficiency, and has rendered Cambridge a complete school of medicine, so that the entire course of medical education can now be completed in the University. In the preliminary subjects—physics, chemistry, and botany, as well as in zoology, comparative anatomy, and morphology—there is, as we might expect, quite an *embarras de richesse* of teachers and opportunities for practical work. Human anatomy will henceforth be taken by Professor Macalister, with his demonstrator, Mr. Hill; physiology by Professor Michael Foster and his assistants in the physiological laboratory; medicine by Professor Paget and Mr. Donald Macalister; pharmacy and therapeutics by Professor Latham; pathology by Dr. Bradbury; medical jurisprudence by Dr. Anningson; midwifery by Dr. Ingle; surgery by Professor Humphry; practical surgery by Mr. Wherry; clinical medicine and surgery by the physicians and surgeons to Addenbrooke's Hospital. Many of the students will doubtless take advantage of the additional opportunities thus offered, and will pursue their medical studies longer in Cambridge than they have hitherto done; but most of them will probably still desire to attach themselves for a longer or shorter period to one of the metropolitan hospitals, and thus have the advantage of pursuing their studies and seeing the methods of two hospitals, a plan which is much to be recommended to all who can follow it.

DIARRHŒAL DISEASES IN ENGLISH AND IN EUROPEAN CITIES.

JUDGED by the figures given in the Registrar-General's last Weekly Return, the recent low temperature and abundant rainfall have effectually checked the marked increase in the fatality of summer diarrhœa, which set in at the end of June. The deaths referred to diarrhœa, in the twenty-eight large English towns dealt with in this return, which had steadily increased from 28 to 491 in the nine weeks ending July 21st, declined to 413 in the last week of that month, and were equal to an annual rate of 2·5 per 1000. The death-rate from diarrhœa, which was equal to 3·4 in London, did not exceed 1·8 in the twenty-seven large provincial towns. The rate showed a decided decline in London, whereas it was somewhat higher in the provincial towns. No death was referred to diarrhœa last week in Plymouth, Wolverhampton, Halifax, or Bradford, while

the rates from this disease ranged upwards in the other towns to 3·2 in Sheffield and Preston, 4·4 in Leicester, and 5·3 in Bolton. The rate was 2·1 in Liverpool, 2·4 in Nottingham, 2·6 in Sunderland, and 2·9 in Manchester. It may be noted that the fatality of diarrhœa last week was below the average for the corresponding week in recent years. In addition to the deaths referred to diarrhœa, 9 deaths in London and 12 in the provincial towns were referred to simple cholera or choleraic diarrhœa; these 9 deaths in London were 5 below the corrected average number in the corresponding week of the last two years. A table in the same return supplies figures which render possible a comparison of the present rates of mortality from diarrhœal diseases prevailing in more than twenty of the largest European cities. This comparison shows how relatively small are the diarrhœal rates reported in our large English towns. The mean annual death-rate from these diseases in all the European cities for which the necessary figures are given averaged 8·7 in the most recent week for which information is available; this rate is considerably more than double the highest weekly rate yet recorded this year in the English towns. The most remarkable mortality from this cause occurred in the nine German and Austrian cities embraced by the table. The annual rate from diarrhœal diseases in these nine cities averaged no less than 14·5 per 1000; the highest of the several rates were 13·3 in Buda-Pesth, 14·4 in Munich, 14·6 in Breslau, and 26·9 in Berlin. The rate in Berlin was almost unprecedentedly high, and was more than six times that prevailing in London. Among the other European cities, it may be noted that the diarrhœa rate was 4·1 in Paris, 5·9 in Brussels, 5·8 in Stockholm, 6·6 in Christiania, and 6·0 in Vienna. Thus the rate in each of these cities, situated both north and south of London, very considerably exceeded the mean rate that prevailed in the large English towns. In calculating these rates, the deaths referred to all forms of diarrhœal disease, which are frequently returned under a variety of headings in the foreign returns, have been classed together, as affording a more trustworthy comparison with the English figures.

A MEDICAL HOLIDAY.

THE annual holiday has become an established custom with most of our countrymen. Perhaps it is sometimes overdone, as when persons whose surroundings are in every way conducive to health, who live in a rural district, and do not find their occupations tax their powers severely, are not content without a regularly recurring change of scene. This is a natural result of *ennui*, a perfectly legitimate feeling, but one which hardly requires further comment from us. But to others a vacation period is an absolute necessity, and to none more than the laborious medical man, especially perhaps, though not alone, if a city be his sphere of work. His atmosphere, physical and psychical, is apt to become oppressive. From six to nine hours every day, with little interruption, Sunday itself but a partial exception, he is in contact with one or other form of disease; between-times driven in a close carriage—would that some airier vehicle were more commonly in use,—or living under the same hospital roof with his patients, his mind more frequently than other men's obliged to travel in the graver shades of thought, he needs for mere health's sake that change to purer air and cheerful scenes, which he so often recommends to his patients as the best of tonics. The very method of his work requires that he should sometimes leave it if he is to discharge his duties effectively. It is constant; irregular calls and interruptions transfer, but do not arrest, his energy; he finds it incumbent often that his leisure even shall bear useful fruit in professional research, and in his mere routine duty anxieties and responsibilities exercise his moral principle to the full as highly as his other powers are tried. We would therefore strongly recommend that the medical man should break his work by regular and seasonable relaxation. We know that he is not a grumbler, and that if bound by duty he will seek no change besides the daily variations of that duty. Still everyone can at some time find an opportunity for recruiting his powers, and he who knows best how to use it will be well repaid in the prolongation of his working life and the increase of his aggregate usefulness. At no time probably could our counsel be more appropriate than at present. The exhausting heat of summer is giving place to the temperate and bracing weather of early autumn, and we stand before the threshold of the winter's work. Now, therefore, is the practitioner's period for recuperation and preparation. But his relaxation must mean more than mere leisure; it must mean recreation. For this result, change of scene, of occupation, and of air are necessary; change by preference to a pure and bracing sea air. For men not specially liable to colds, or to sea-sickness, there is nothing more pleasant or refreshing than a sea voyage of a week or two. After sea air, mountain or hill air is most beneficial; equally pure, though not so highly ozonised as sea air, its comparative rareness and dryness, under favourable conditions render it even more stimulating to the play of lung and chest. Rest is the other great holiday essential besides change. This has probably a different meaning to each individual. Absolute idleness refreshes no one who is not incapacitated by downright ill-health. A means of pleasantly spending time is necessary for all of us. Yet no form of exercise which implies fatigue and exhaustion is advantageous. But moderate muscular exertion is highly so—light rowing, tennis, cricket, fishing in river or sea, combined as it often is with rowing, shooting (if that be obtainable), and riding. Many men of active minds cannot with any comfort rest altogether from mental work. We have known professional men who could not with an easy conscience omit a perusal of the Iliad, the Odes of Horace, or some English classic during vacation-time. An hour or two a day, not more, may, probably does, benefit such men by giving their minds that healthful degree of exercise which acts on them, like light muscular movement on the body, as a restorative and tonic. But such mental work should not be in the old professional groove. Variety is as necessary for mind as body. We believe that if any driven worker will but act in accordance with these limits, he will on returning to his duties find that he has more appetite for them, that he can carry through more work at a time and with more zest, more endurance, and less sense of after-exhaustion than he could otherwise do. He will find that he has a stronger versatility in applying himself to diverse successive avocations, and a greater elasticity and power of grappling with perplexities of thought. In a word, he will be much more fit to battle with disease, and in proportion more abundantly useful.

USE OF SALT.

WE have received from a correspondent a letter making some inquiries into the use of salt, and we are given to understand that amongst other follies of the day some indiscreet persons are objecting to the use of salt, and propose to do without it. Nothing could be more absurd. Common salt is the most widely distributed substance in the body; it exists in every fluid and in every solid; and not only is it everywhere present, but in almost every part it constitutes the largest portion of the ash when any tissue is burnt. In particular it is a constant constituent of the blood, and it maintains in it a proportion that is almost wholly independent of the quantity that is consumed with the food. The blood will take up so much and no more, however much we may take with our food; and on the other hand, if none be given, the blood parts with its natural quantity slowly and

unwillingly. Under ordinary circumstances a healthy man loses daily about twelve grains by one channel or the other, and if he is to maintain his health that quantity must be introduced. Common salt is of immense importance in the processes ministering to the nutrition of the body, for not only is it the chief salt in the gastric juice, and essential for the formation of bile, and may hence be reasonably regarded as of high value in digestion, but it is an important agent in promoting the processes of diffusion, and therefore of absorption. Direct experiment has shown that it promotes the decomposition of albumen in the body, acting probably by increasing the activity of the transmission of fluids from cell to cell. Nothing can demonstrate its value better than the fact that if albumen without salt is introduced into the intestine of an animal no portion of it is absorbed, whilst it all quickly disappears if salt be added. If any further evidence were required it would be found in the powerful instinct which impels animals to obtain salt. Buffaloes will travel for miles to reach a "salt-lick;" and the value of salt in improving the nutrition and the aspect of horses and cattle is well known to every farmer. The popular notion that the use of salt prevents the development of worms in the intestine has a foundation in fact, for salt is fatal to the small threadworms, and prevents their reproduction by improving the general tone and the character of the secretions of the alimentary canal. The conclusion therefore is obvious that salt, being wholesome, and indeed necessary, should be taken in moderate quantities, and that abstention from it is likely to be injurious.

EXPERIMENTAL DIPHTHERIA.

A TREATISE bearing the above title, and written by Dr. Otto Heubner of Leipsic, has lately received the prize given by the Empress of Germany for the best essay on the subject of diphtheria and its cure. Neither the committee awarding the prize nor the author of the work considers that its contents have solved the important question propounded. The members of that body have pointed out that they dissent from many of his theories, but recognise the completeness with which he has treated the portion of his subject which deals with practical experiments regarding the nature and pathological development of the malady. In his introductory remarks, Dr. Heubner seeks to prove that the local and general symptoms of diphtheria form two distinct elements of the disease, and urges that, in trying for experimental purposes to bring about in animals a condition which resembles a diphtheritic affection of the human organism, no system is of real value which does not reproduce in a corresponding manner the membranous formation so rarely absent in cases of diphtheria. While admitting the identical nature of the results obtained by Weigert with corrosive applications and of the local affection typical of diphtheria, he considers that these results are deficient in practical value by reason of the difference between the means employed in their production and the active causes of diphtheria in the human subject. With the view therefore of establishing artificial diphtheria in a manner closely resembling the natural process, Dr. Heubner commenced a series of experiments founded upon the results obtained by Cohnheim and Litten in their researches as to the effects on various parts of the animal system of a temporary stoppage of circulation. The condition induced has been described as coagulation-necrosis by Cohnheim and Weigert, and Dr. Heubner arrived at the conviction that diphtheria was in reality produced by a local condition of a character analogous to the inflammation of the tissue of the kidneys, &c., recorded in connexion with their experiments. His method of procedure (for which he acknowledges his indebtedness in some degree to Professor Cohnheim) consisted in the application of a thread ligature to the urinary bladder of a rabbit in such a way as to produce a temporary but complete stoppage of circulation. A considerable portion of that section of the work which deals with Dr. Heubner's own experiments is devoted to the description of the various appearances presented by the organ in question upon the animals being killed at periods varying from twenty-four to seventy-two hours after the performance of the operation referred to. In his general comparison of these appearances with those which attend diphtheria in the human organism, Dr. Heubner alludes to the simultaneous process of necrosis and of swelling as finding a parallel in the diphtheria which at times accompanies scarlet fever rather than in the primary form of the disease. This fact he ascribes, however, to the exigencies of the case, which involve the stoppage of circulation in the entire wall of the organ experimented upon. From this he argues that, were the mucous tissue exclusively subjected to the influences referred to, an isolated affection would be produced of an identical character with that of primary diphtheria in the human subject. In one of his experiments such a result was really attained. He further maintains that, if by the action of cold or other causes a stoppage of circulation for two hours were produced in the most superficial portions of a mucous membrane, there would be seen an exudation of a croupy description a day or two later, these limits of time corresponding with those which were found to regulate the progress of the experiments carried out by Dr. Heubner himself. In the subsequent portions of the work the question of the general diphtheritic infection is treated, and the relations of the poison of the disease to the local membranous formation is discussed. In recording its dissent from various theories propounded by Dr. Heubner, the committee expresses its opinion that the experimental results described in his treatise may be found of practical value, though perhaps not without certain modifications in the details of his mode of procedure. The second portion of the work deals, amongst other matters, with the results obtained by the introduction into the animal system of diptheritic matter from the human subject. With this part the committee do not see their way to express concurrence; their decision having been given from an appreciation of the earlier portion of the treatise, to which detailed reference has been made.

"MEDICAL FAMILY REGISTERS."

MR. FRANCIS GALTON, F.R.S., whose labours in some of the previously unexplored fields of anthropology—for example, psychometry—are well known, though not as widely as they deserve to be, has inaugurated an attempt to establish a methodised system of family registers, comprising such particulars as race, conditions of life, form and feature, health, vigour, sensation, artistic capacities, intellect, character, and the like. He appeals to the medical profession for help, and proposes to offer prizes amounting in all to five hundred pounds for the best collection of registers. Later on, probably, Mr. Galton will make a more detailed statement of his scheme. For the present he has contented himself with a preliminary attempt to formulate the idea by a short paper on the subject in the current number of the *Fortnightly Review* (August). The notion is undoubtedly a good one. We are not prepared to discuss the plan sketched in mere outline. Speaking generally we must confess it appears somewhat crude. It would be a great pity if the endeavour should fail from want of careful development. We therefore counsel the author to address himself seriously to the difficult task of working out his scheme more fully before he goes farther. It seems to us that a well-devised system of the class indicated would be of great service to the interests not only of anthropology, but of practical medicine, and every precaution should be taken to make it successful.

THE BERLIN MEDICAL CONGRESS.

THIS assembly, which took place during the latter days of June, occupied itself amongst other subjects with several questions of interest affecting the relations of the medical profession with the Government. The discussion as to the precautions to be taken against the spread of infectious diseases was carried on with special reference to the projected legislation on the subject, and the introduction of public disinfecting establishments was approved by the Congress, without, however, the practical application of this principle being dealt with. One of the special topics for debate was the suggestion that the State should take upon itself the care of the families of such doctors, clergymen, attendants, and police officials as contracted fatal illnesses by visiting in their official capacity persons suffering from infectious diseases. In renewing the proceedings, the *Gesundheit* remarks that such a proposal does not sufficiently recognise the services which have been and would be rendered during epidemics by medical men not holding official positions. An explanation was made by the principal speaker on the subject that doctors holding official positions are bound to see dangerous cases, while private practitioners can refuse to do so. This argument is refuted with much energy by the journal referred to, as being founded on a mistaken appreciation of professional feeling on such a matter. Dr. Koch read a paper of special interest upon Methods of Discovering Microcosms in Earth, Air, and Water. The Congress visited the Osdorf sewage farms before separating, and were much interested in what they saw.

LONG SITTINGS IN PARLIAMENT.

IN these degenerate—or advanced—times the average constitution of the British legislator seems to require a good deal of rest. In the face of this patent fact the Parliament of 1883 appears to be bent on killing off as many as possible of its members by unduly prolonged sittings. Why? It is not unnatural that the Government should desire to make a fair show of work and pass its most cherished measures. It is, perhaps, not less natural that the Opposition and the "Obstructives" should wish to thwart this endeavour. Remembering, however, that the tale of work has been marred by captious and futile criticism, Her Majesty's ministers might very fairly decline to waste their strength, and that of their fellows. They *know* that the long sittings in which they are engaged are injurious to health, and it is a pity to press them.

ANIMALS DEAD OF CONTAGIOUS DISEASES.

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unwillingly. Under ordinary circumstances a healthy man loses daily about twelve grains by one channel or the other, and if he is to maintain his health that quantity must be introduced. Common salt is of immense importance in the processes ministering to the nutrition of the body, for not only is it the chief salt in the gastric juice, and essential for the formation of bile, and may hence be reasonably regarded as of high value in digestion, but it is an important agent in promoting the processes of diffusion, and therefore of absorption. Direct experiment has shown that it promotes the decomposition of albumen in the body, acting probably by increasing the activity of the transmission of fluids from cell to cell. Nothing can demonstrate its value better than the fact that if albumen without salt is introduced into the intestine of an animal no portion of it is absorbed, whilst it all quickly disappears if salt be added. If any further evidence were required it would be found in the powerful instinct which impels animals to obtain salt. Buffaloes will travel for miles to reach a "salt-lick;" and the value of salt in improving the nutrition and the aspect of horses and cattle is well known to every farmer. The popular notion that the use of salt prevents the development of worms in the intestine has a foundation in fact, for salt is fatal to the small threadworms, and prevents their reproduction by improving the general tone and the character of the secretions of the alimentary canal. The conclusion therefore is obvious that salt, being wholesome, and indeed necessary, should be taken in moderate quantities, and that abstention from it is likely to be injurious.

EXPERIMENTAL DIPHTHERIA.

A TREATISE bearing the above title, and written by Dr. Otto Heubner of Leipsic, has lately received the prize given by the Empress of Germany for the best essay on the subject of diphtheria and its cure. Neither the committee awarding the prize nor the author of the work considers that its contents have solved the important question propounded. The members of that body have pointed out that they dissent from many of his theories, but recognise the completeness with which he has treated the portion of his subject which deals with practical experiments regarding the nature and pathological development of the malady. In his introductory remarks, Dr. Heubner seeks to prove that the local and general symptoms of diphtheria form two distinct elements of the disease, and urges that, in trying for experimental purposes to bring about in animals a condition which resembles a diphtheritic affection of the human organism, no system is of real value which does not reproduce in a corresponding manner the membranous formation so rarely absent in cases of diphtheria. While admitting the identical nature of the results obtained by Weigert with corrosive applications and of the local affection typical of diphtheria, he considers that these results are deficient in practical value by reason of the difference between the means employed in their production and the active causes of diphtheria in the human subject. With the view therefore of establishing artificial diphtheria in a manner closely resembling the natural process, Dr. Heubner commenced a series of experiments founded upon the results obtained by Cohnheim and Litten in their researches as to the effects on various parts of the animal system of a temporary stoppage of circulation. The condition induced has been described as coagulation-necrosis by Cohnheim and Weigert, and Dr. Heubner arrived at the conviction that diphtheria was in reality produced by a local condition of a character analogous to the inflammation of the tissue of the kidneys, &c., recorded in connexion with their experiments. His method of procedure (for which he acknowledges his indebtedness in some degree to Professor Cohnheim) consisted in the application of a thread ligature to the urinary bladder of a rabbit in such a way as to produce a temporary but complete stoppage of circulation. A considerable portion of that section of the work which deals with Dr. Heubner's own experiments is devoted to the description of the various appearances presented by the organ in question upon the animals being killed at periods varying from twenty-four to seventy-two hours after the performance of the operation referred to. In his general comparison of these appearances with those which attend diphtheria in the human organism, Dr. Heubner alludes to the simultaneous process of necrosis and of swelling as finding a parallel in the diphtheria which at times accompanies scarlet fever rather than in the primary form of the disease. This fact he ascribes, however, to the exigencies of the case, which involve the stoppage of circulation in the entire wall of the organ experimented upon. From this he argues that, were the mucous tissue exclusively subjected to the influences referred to, an isolated affection would be produced of an identical character with that of primary diphtheria in the human subject. In one of his experiments such a result was really attained. He further maintains that, if by the action of cold or other causes a stoppage of circulation for two hours were produced in the most superficial portions of a mucous membrane, there would be seen an exudation of a croupy description a day or two later, these limits of time corresponding with those which were found to regulate the progress of the experiments carried out by Dr. Heubner himself. In the subsequent portions of the work the question of the general diphtheritic infection is treated, and the relations of the poison of the disease to the local membranous formation is discussed. In recording its dissent from various theories propounded by Dr. Heubner, the committee expresses its opinion that the experimental results described in his treatise may be found of practical value, though perhaps not without certain modifications in the details of his mode of procedure. The second portion of the work deals, amongst other matters, with the results obtained by the introduction into the animal system of diptheritic matter from the human subject. With this part the committee do not see their way to express concurrence; their decision having been given from an appreciation of the earlier portion of the treatise, to which detailed reference has been made.

"MEDICAL FAMILY REGISTERS."

MR. FRANCIS GALTON, F.R.S., whose labours in some of the previously unexplored fields of anthropology—for example, psychometry—are well known, though not as widely as they deserve to be, has inaugurated an attempt to establish a methodised system of family registers, comprising such particulars as race, conditions of life, form and feature, health, vigour, sensation, artistic capacities, intellect, character, and the like. He appeals to the medical profession for help, and proposes to offer prizes amounting in all to five hundred pounds for the best collection of registers. Later on, probably, Mr. Galton will make a more detailed statement of his scheme. For the present he has contented himself with a preliminary attempt to formulate the idea by a short paper on the subject in the current number of the *Fortnightly Review* (August). The notion is undoubtedly a good one. We are not prepared to discuss the plan sketched in mere outline. Speaking generally we must confess it appears somewhat crude. It would be a great pity if the endeavour should fail from want of careful development. We therefore counsel the author to address himself seriously to the difficult task of working out his scheme more fully before he goes farther. It seems to us that a well-devised system of the class indicated would be of great service to the interests not only of anthropology, but of practical medicine, and every precaution should be taken to make it successful.

THE BERLIN MEDICAL CONGRESS.

THIS assembly, which took place during the latter days of June, occupied itself amongst other subjects with several questions of interest affecting the relations of the medical profession with the Government. The discussion as to the precautions to be taken against the spread of infectious diseases was carried on with special reference to the projected legislation on the subject, and the introduction of public disinfecting establishments was approved by the Congress, without, however, the practical application of this principle being dealt with. One of the special topics for debate was the suggestion that the State should take upon itself the care of the families of such doctors, clergymen, attendants, and police officials as contracted fatal illnesses by visiting in their official capacity persons suffering from infectious diseases. In renewing the proceedings, the *Gesundheit* remarks that such a proposal does not sufficiently recognise the services which have been and would be rendered during epidemics by medical men not holding official positions. An explanation was made by the principal speaker on the subject that doctors holding official positions are bound to see dangerous cases, while private practitioners can refuse to do so. This argument is refuted with much energy by the journal referred to, as being founded on a mistaken appreciation of professional feeling on such a matter. Dr. Koch read a paper of special interest upon Methods of Discovering Microcosms in Earth, Air, and Water. The Congress visited the Osdorf sewage farms before separating, and were much interested in what they saw.

LONG SITTINGS IN PARLIAMENT.

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LONDON WATER.

THE condition of the water supplied to the inhabitants of London, at all times a matter of high consideration, is at the present moment one of supreme importance. It is therefore not pleasant to be informed by Colonel Bolton, in his report of the metropolitan waters for June, that there is still wanting a recognised "standard of quality," by which the sources of supply of water to the metropolis might be regulated. "The state of the water in the Thames at Hampton, Molesey, and Sunbury (where the intakes of the West Middlesex, Grand Junction, Southwark and Vauxhall, Lambeth, Chelsea, and East London Companies are situated) was good in quality during the whole of the month of June, with the exception of the 23rd and 24th, when it was bad," says Colonel Bolton. "The intakes are closed as much as possible, so as to avoid taking in water, during floods. While floods prevail water companies unprovided with sufficient storage reservoirs are compelled to take in dirty water. The Southwark and Vauxhall Water Company, being totally unprovided with reservoirs for subsidence, have to draw from the river at all times, and consequently their filter beds soon become choked up." It is satisfactory to learn that the constant supply system is extending, so that we may hope in course of time London will be free from the dangers which lurk in foul cisterns and filthy butts, which receive not only the drippings from sooty roofs, but, not unfrequently, deposits of unutterable vileness from the mischievous or playful hands of the young unwashed.

PREVENTIVE MEDICINE AND CRIME.

In the State of Pennsylvania the Inspectors of Prisons are greatly in advance of our own inspectors in respect to the attention they bestow on the subject of health in relation to crime. The *Medical and Surgical Journal* of Boston recently analysed the return made by the inspectors in that State, with the result of an obvious inference that "preventive medicine is worth many policemen and much machinery for conviction and incarceration." Our contemporary finds that over 76 per cent. of the criminals in the State Penitentiary have bad-health histories. Epilepsy or phthisis, or both, are found as transmitted hereditary disease in the families of this very large proportion of criminals. Total abstinence from alcoholic drinks is common among the criminal classes of America, but it does not cure the malady of crime. Preventive medicine properly so called is the great social and moral regenerator.

"BAD SMELLS FROM SEWERS."

THE nuisance of sewer-gas is one thing, the mischief it does to health another. The two matters should be kept distinct. Some sanitary authorities seem to think that if there is no "smell" there can be no danger; while others content themselves with ventilating in some places to the disregard of smells indicating the presence of poisonous gases in other situations. It is not enough to ventilate sewers unless they are so purified by the process that they do not constitute a nuisance at *any part* of their course. We have created a great difficulty for ourselves by the system of closed drains. We must find a way out of that difficulty at any pains and cost.

THE CALAMITY AT CASAMICCIOLA.

THE authorities of the destroyed city of Casamicciola have wisely determined to cover the site of the ruins with lime. The decision is wise, if only they use quicklime, not the lime employed by the murderer Wainwright to burn away the remains of his victim, but which, of course, only preserved them. Earthquake is an occurrence against which it is impossible to protect a city, but Ischia and the adjacent isles are volcanic formations, and the agent in their production is still active. Is it prudent to inhabit them?

IT is understood that the Diseases Prevention (Metropolis) Bill, of which Sir Charles Dilke has given notice, will enable the Local Government Board, in the event of the Diseases Prevention Act, 1855, being put in force in the metropolis in consequence of an outbreak of cholera, to assign to the managers of the Metropolitan Asylum District the duty of providing hospital accommodation for cholera patients. The Bill does not, however, deprive the vestries of the powers which they now possess either as sanitary authorities or as local authorities under the Diseases Prevention Act, and under its provisions the vestries as well as the Metropolitan Asylums Board may have duties imposed on them with regard to the provision of hospital accommodation. The Bill also provides that in the case of vestries supplying cholera hospitals, the cost of the hospital buildings and a considerable proportion of the salaries of the officers and servants employed in the hospitals shall be a charge upon the Metropolitan Common Poor Fund, and, consequently, will be a charge not on the particular locality but on the whole metropolis.

A SECOND Government inquiry in connexion with the question of the best means of securing a better supply of water for the inhabitants of Ely took place on the 17th ult., when Mr. S. J. Smith, C.E., one of the engineering inspectors of the Local Government Board, attended to investigate the scheme proposed by the Ely Local Board for enlarging and improving their works, and to hear objections to the scheme, the Board having applied to the Local Government Board for their sanction to the borrowing of £2500 to be expended in carrying out the same. The scheme was objected to as being insufficient and incapable of providing a supply of pure potable water. At the close of the inquiry, which lasted eight hours, the inspector stated that the result of his investigation and the decision of the Local Government Board would be communicated with as little delay as possible to the Board at Ely.

WE regret to learn that Surgeon C. B. Lewis, Army Medical Department, died of cholera at El Werdan on July 30th. He served in Egypt throughout the late war, remaining there at its conclusion with the army of occupation. He received the Egyptian medal and the Khedive's star. Previously to entering the Service, he had served under Government during the whole of the Zulu campaign, for which he also received the medal. He was a student at King's College Hospital, which he entered in May, 1872, and having served in most of the clinical appointments, qualified as M.R.C.S.E. in 1877. He was most popular with his fellow students, and was one of the best known athletes in the metropolitan schools. His loss will be greatly felt by his numerous friends and colleagues.

IT is satisfactory to know that one smackowner—as appears from a statement made, when offering to supply fish to the guardians of Islington at *twopence* a pound—is already supplying more than forty institutions. We hope before long the practice of giving at least one fish dinner a week to paupers may become general.

THAT large open ditch, the Regent's Canal, is again a nuisance. Will no amount of remonstrances compel the responsible authorities to place this useful but noisome work in a sanitary condition? Whenever the weather becomes only slightly "warm," the canal is intolerable.

IN a graduation thesis which has been specially commended by the Medical Faculty of the University of Edinburgh, Dr. Dyce Fraser has given the results of his investigations on the etiology of scarlet fever, which he has been carrying on in the University Physiological Laboratory during the past winter. From an examination of the blood, urine, and throat discharge of a number of cases, and from a series of cultivations of desquamated epidermis, Dr. Fraser has been led to conclude that the disease in question is not due to a bacillus, but that it is most probably due to a micrococcus. Dr. Fraser is still engaged in his research.

A CHINESE professor of the healing art has been fined a hundred dollars for practising in the Arizona territory without a diploma. The Chinaman produced what purported to be a diploma, but the Court was not learned enough to test its value, and imposed the fine. We trust the United States will not let their wholesome criticism of diplomas begin and end with those of the "Heathen Chinee." Charity, which in this case is only another name for criticism, begins at home.

A YOUNG woman, charged with exposing herself in railway carriages and other conveyances while affected with small-pox, was brought before the Lambeth Police-court on July 29th. The magistrate said it was very shocking that a small-pox patient should act so, but dismissed the case, as he thought there was no wilful neglect. So long as patients act so, and can find indulgent magistrates to refuse to punish them, so long may we expect to find disease spread in all directions.

ON Sunday last, we regret to learn, Sir George Owens, M.D., of Dublin, fell and dislocated his shoulder. He is progressing favourably.

WE understand that Mr. Field, aural surgeon to St. Mary's Hospital, has been appointed Dean of the Medical School.

IT is reported that no fewer than fifty-five children died from measles and whooping-cough on board the steamer *Hankow* during her voyage from London to the Sandwich Islands.

PROFESSOR G. M. HUMPHRY, M.D., F.R.S., has accepted the Presidentship of the Congress of the Sanitary Institute of Great Britain to be held in Glasgow in September next.

THE ROYAL HOSPITAL FOR CHILDREN AND WOMEN. On the afternoon of the 28th ult. the Princess of Wales, one of the patrons of the institution, accompanied by her three daughters and the Princess Charlotte, paid a visit to this hospital. The Royal party were received on their arrival by the sister superintendent of the hospital and the house-surgeon (Mr. J. F. Briscoe, M.R.C.S.), by whom they were shown over the establishment. Her Royal Highness brought with her presents of fruit and flowers for the patients, which the Princess, in passing through the several wards, distributed, the gift in each case being accompanied by words of kindly sympathy towards the sufferer. On her departure her Royal Highness expressed her satisfaction and pleasure with her visit, as well as with the management of the institution.

HOSPITAL SATURDAY FUND.—At the meeting of the governing body of this fund on the 28th ult. it was stated that promises of support had been received from members of the metropolitan police force, the Fire Brigade, the *employés* of the General Post Office, the principal railway companies, and from the authorities of the Surrey, Commercial, and East and West India Docks.

THE BRITISH MEDICAL ASSOCIATION.

FIFTY-FIRST ANNUAL MEETING,

Held at Liverpool, August, 1883.

IT is stated that about a thousand members assembled in Liverpool on Tuesday. The meetings are held in University College, Shaw-street, the general meetings in the theatre, and the Sections meeting in the various class-rooms. The first assembly was in the Cathedral church on Tuesday morning, when the Bishop delivered a sermon, taking for his text the words, "Luke, the beloved physician." He referred to the great importance the body, as distinct from the soul, has assumed in the Christian dispensation, and went on to refer in an appreciative manner to the services rendered by the medical profession, and to the great advances our science and art has made of late years.

The Association assembled in general meeting at 3 P.M. for the transaction of business. Dr. Waters was cordially received on taking the chair. The report of the Council was taken as read. The total number of members is now 1050; the income £19,076, expenditure £16,288, leaving a surplus of £2788. The Association has now investments amounting to £13,267. The new bye-laws were then considered. As some of them are contrary to the articles of association, these articles will have to be altered at two special meetings, and after that the bye-laws can be formally passed. At 5 P.M. the meeting adjourned till 8.15, when it reassembled. Dr. Waters announced that among the visitors present were Professor Austin Flint, Professor F. S. Dennis, Professor Lefferts, Professor Snellen, Professor Tilanus, and Capt. Douglas Galton. A very hearty vote of thanks to the retiring President, Dr. Strange, was carried, and he was elected a vice-president for life. The President then delivered his address, which was patiently listened to and warmly cheered at its close. After the address the new bye-laws were considered. They were in the main adopted. Considerable discussion arose on two proposals—to give members unattached to branches the right of electing representatives on the Council, and the payment of railway fares to members of the Council. Both of these proposals were negatived. The meeting was at times very noisy, and even disorderly, and it was nearly midnight before it broke up. The last proposition before it, and one which afforded much amusement, was to abolish all unpaid medical posts of every kind, and to publish a "black list" of patients who did not pay their doctors' bills. Needless to say, this proposition was received with more laughter than serious consideration.

The President, Dr. A. T. WATERS, delivered an address on the Present Aspect and Future Prospects of Medicine. He commenced as follows:—I esteem it an honour of no common kind to be elected President of the British Medical Association, and to be called upon to take the chair at one of its annual gatherings; and to me the honour has a special value, for I can look back on many years of close relation with the Society; it has been the means by which I have formed friendships whose importance I cannot over-estimate, and its meeting have been amongst the most interesting circumstances of my life. Twenty-four years have passed since the Association met in Liverpool to celebrate its twenty-seventh anniversary. These years have been marked by the uninterrupted prosperity of our Society, by a large increase in our numbers, and an increasing interest in the proceedings of our annual gatherings. In the few remarks which I have to address to you on this occasion, I purpose to dwell very briefly on some of those points which seem to me worthy of our attention with reference to the present condition and future prospects of our profession. I think it would be well if we were to consider that we have now entered on a new phase—that we have taken, as it were, a new departure, and that with the great advantages we possess we should, as a Society, and also as a profession, strive to develop our science more rapidly in the future than it has been developed in the past, and that our progress should be more marked in all that relates to the higher aspirations of our calling. Nor are there wanting signs which point to the probability of such a consummation. We now see a higher standard of medical education insisted on; we see, on all sides, the in-

ductive method of investigation brought to bear on the great problems of medicine; more and more we see dissatisfaction with our present uncertain and inexact knowledge; and we cannot doubt that the observations which are being carried on, and especially those which are being conducted under the auspices of our Collective Investigation Committee and of the Society for the Cultivation of Medicine by Original Research, will before very long bear fruits, and lead to generalisations of the most important kind. To my mind there is nothing in the present aspect of medicine more satisfactory, or more likely to raise it from the region of empiricism and place it on a higher scientific level, than the endeavour now being made to render our knowledge more definite and exact; and if I were to point to one circumstance which, in my opinion, has, probably more than any other, contributed to this result, I should say it was the introduction into our practice of *instruments of precision*. These have furnished us with means by which the senses may be placed in immediate relation with the actual phenomena of disease, and these phenomena are sometimes of so simple a character, yet so indicative of the general morbid state, and require so little mental analysis, that the very tryo can almost read their significance. No more important step was ever made in practical medicine than that of the application of physical principles to the diagnosis of diseases of the chest. In what condition would now be our knowledge of diseases of the lungs, had the researches so largely associated with the name of Laennec never been made? In what condition was the knowledge of cardiac diseases before the investigations and experiments of the physiologist gave us definite information with reference to the movements of the heart, the action of its valves, and the causes of its sounds? The differentiation of lung and heart affections, by the aid of physical inquiry, the possibility of making an exact diagnosis without investigating one single general symptom, constitute a triumph for medicine which is not to be surpassed in the practical application of scientific principles in any other department of human knowledge; and we must not forget that this marked advance has been achieved in a comparatively short space of time, for it was not till 1819 that Laennec gave his observations to the world. It would be well if in all departments of medicine there were the same facilities for exact diagnosis as in diseases of the heart and lungs; but what the application of acoustic principles has done in these affections, the application of chemical principles, and the use of the microscope, the ophthalmoscope, the laryngoscope, and the sphymograph have in a measure done for the diseases of some other organs. And may we not hope that, with reference to the diseases of the nervous system—the most obscure of all which come under the notice of the physician—the researches of the present day, and the attempts now being made to clear up our knowledge of the physiology of the brain and to localise its various functions, may be followed by results which will add largely to our powers of differentiating nervous affections, and of successfully treating them? Again, in referring to instruments of precision, let me observe how important are the results which have followed the use of that instrument which, when the Association last met here, was scarcely ever used in this country, but which is now the constant companion of every practitioner—the clinical thermometer. How valuable is the information which it gives! How intimately does it place that important factor of fever—increased temperature—under our observation! Without attempting to discuss the relations of heat to the other phenomena of fever, I may observe that, in a large number of cases of disease, the measure of the temperature is undoubtedly the measure of the danger; and that the immediate recognition of its rise to an inordinate extent is the first step towards the application of means on which the life of the patient may depend. In referring to this subject, I cannot refrain from alluding to the fact that it was a Liverpool physician, Dr. Currie, who, early in the present century, was the pioneer in the use of cold applications to the surface of the body in the treatment of fevers; and, although Currie's practice fell into disuse, the merit of initiating a method of reducing temperature, which the use of the thermometer has enabled us in the present day to place on a more successful basis, may, I think, be fairly claimed for him. How often has the use of the laryngoscope enabled the practitioner to recognise the true bearings of certain laryngeal symptoms, and to differentiate between organic disease of the larynx and the results of pressure from a thoracic tumour! How often has it enabled him to decide on the nature of a laryngeal growth, and the possibility, or otherwise of successful medical or surgical treatment! How much do we not owe to the introduction of the opthalmoscope—an instrument which has literally thrown a flood of light on the affections of the eye, and may be said, indeed, to have revolutionised the whole practice of ophthalmic medicine; whilst by enabling us to recognise certain conditions of the eye, and to interpret their significance with reference to other morbid states, it has materially aided the work of the general physician! The sphygmograph is an instrument which, though largely employed in hospital work, has not hitherto found its way into general use. It cannot be said to have had much influence on our practice; but I think we often derive important indications from it. In considering the standpoint of medicine, we should always bear in mind that medicine must be judged by the therapeutic results which it achieves; and in proportion as we can show that the researches of the physiologist, the pathologist, and the chemist, and the application of scientific principles, have enabled the physician to deal more successfully with disease, to anticipate its development, to recognise its earliest symptoms, to mitigate its severity, and reduce its rate of mortality, so do we establish for our art a claim on the confidence and gratitude of mankind; and in this respect the present state of medicine shows no slight advance on the past, and promises a more rapid progress in the future. With regard to the affection which we term pneumonia, have we not seen the introduction into practice of a mode of treatment which has deprived the disease of much of its terror and greatly reduced its mortality? Whatever be the views which we entertain of the nature of pneumonia, the important fact remains that we may enumerate among the successes of medicine of the present day a large reduction in the mortality from the affection. Again, the recent development of the practice of tapping the chest in pleuritic effusion, an operation comparatively rarely performed thirty years ago, is, in my opinion, a very marked improvement in therapeutics. How satisfactory have been the practical results which have followed the researches that have been made within the past half century into the nature of continued fevers! It is now about forty years since Stewart (whose recent loss we have todeplore) published his investigations in typhus and typhoid, and showed their distinct and separate individuality. Other labourers have since worked in the same field, and have established beyond a doubt the facts which he then demonstrated, the knowledge of which has largely tended to the prevention of these affections, and enabled us to trace to their source many outbreaks which in former times would have been involved in mystery. Nor can we point, perhaps, to any one circumstance which has had a more beneficial influence on the treatment of these diseases than the recognition of the pathological changes by which they are characterised. The precautions which we consider imperative during convalescence in the one disease, precautions which may be in large measure neglected in the other, are but the outcome of the careful investigations which have been made into the morbid changes by which the two affections are attended. And if we have no faith in any specific line of treatment, and are for the most part content to watch our patients carefully, and to guide them as it were through their attacks, this is not scepticism—it is the result of a more intimate knowledge of these diseases, of a better acquaintance with their natural history, and a better appreciation of their pathological changes. It is impossible to enumerate the various affections in which there is a marked improvement in treatment, and those which I have referred to must be considered simply as illustrations of my position; but whilst I speak with satisfaction on this subject, I must not forget to mention that, in the midst of many successes, we have instances of, I will not say actual, but comparative, failure. Our knowledge of the pathology of some affections remains very imperfect, and our therapeutics are in some respects very unsatisfactory. Although rheumatic fever is one of the most common diseases, it must be confessed that we are ignorant of its pathology. Again, how unsatisfactory is the knowledge we possess with reference to the pathology of diabetes. We have long recognised its clinical features, and we are often able to modify its course and mitigate its symptoms; but of its real nature we are ignorant, and nothing has tended to show this more than the discussion recently carried on at one of our Societies. But this confession of our ignorance is one of the most promising features of our day, it is that which

gives us assurance that every effort will be made towards increased knowledge in the future. Whence comes this want of success in the investigation of the nature of diabetes? We have approached it from the physiological side, from the chemical side, and from the pathological side, and have failed. Can we hope that by combined observation of its clinical features, of its life-history, and its relations to families and individual peculiarities, we may elucidate its nature? And here I must express the great satisfaction with which, in common, I am sure, with every member of the Association, I have seen the establishment of this Collective Investigation Committee, how strongly I feel that it is capable of accomplishing most valuable work, and how much I think we are indebted to Professor Humphry for initiating the movement. Doubtless, a large part of the work of the Committee will consist in collating facts with reference to specific diseases; but there is one line of inquiry which, I trust, will receive from it a share of attention. I mean the consideration of the points of difference between functional disturbances and the early symptoms of organic affections. How difficult is it sometimes to say, when some slight symptom presents itself, and when no objective signs of organic disease can be discovered, whether that symptom indicates incipient structural change or mere functional disarrangement. Upon the right appreciation of the phenomenon, however, the safety of the patient may depend. In an investigation of this kind our hospital work is comparatively useless. It is in the daily work of private practice that observations such as I have referred to can alone be satisfactorily made; and it is, therefore, to the great bulk of practitioners throughout the country that we must look for aid in this matter. But of all the questions which now engage the attention of the pathologist and physician, there is no one which surpasses in importance that which relates to the dependence of certain diseases on micro-organisms. The subject is one of the greatest possible interest, and fraught with bearings of a practical character which already have had, and are doubtless destined still further to have, a vast influence on the prevention and treatment of disease. The establishment of the fact that pébrine, chicken-cholera, and splenic fever depend on the presence of specific microbes, and that relapsing fever has associated with it, if not indeed causing it, a like organism, must be classed amongst the most striking discoveries of the present day, and undoubtedly mark an epoch in the history of pathological science; whilst the gradually accumulating evidence that tuberculosis is the result of a parasitic element seems likely to lead to its being placed in the same category as those affections the pathology of which appears now to be clearly established. Moreover, the brilliant results which have followed the process of attenuative culture of the virus of some of the affections to which I have referred, and the protective influence of vaccination by these attenuative fluids, as carried out by Pasteur, lead us to hope that by further researches in the same direction, we may yet discover some means for checking the ravages of tuberculous and other allied diseases as certainly as the great discovery of Jenner has enabled us to check the ravages of small-pox. Nor is it possible, perhaps, to point to any single fact in connexion with the practical application of science which is more striking than that of the relation of disease to minute organisms. The whole subject has been evolved from the researches of a few naturalists who studied the smallest of living beings. What possible use, might it not have been said, could investigations of this kind have in reference to the maladies either of man or the lower animals? And yet we have seen that these studies of minute life have led to the prevention of disease. Of the many problems which await solution in connexion with the subject which I have just considered, no one is more pressing than that of the dependence, or otherwise, of pulmonary consumption on the bacillus which has been so largely found, not only in the morbid deposits which result from the disease, but in the expectoration of phthisical patients. Should it be found that in all cases of genuine tubercular phthisis the bacillus tubericulosis is present, and should future researches show that the disease is caused by the parasite, a solidity will be given to the pathology of the affection, and perhaps the therapeutics of it will be materially aided. I would further remark that the past years have been fertile in the introduction of substances which are of the highest value to the physician in the actual treatment of the disease. The bromide compounds, chloral, croton-chloral, the various forms of pepsine and pancreatine, the salts of salicylic acid, may be enumerated, amongst others which the chemist has furnished for our use; and, whilst we may perhaps feel that he will best serve the ends of medicine who shall teach us how to employ most successfully the remedies we already possess, and whilst we would deprecate the incessant desire for the introduction of new chemical compounds, let us by no means discourage the laudable ambition of enriching our Pharmacopœia with agents of sterling value. We must never forget that, in addition to the useful drugs to which I have already referred, the present age has given us, by the agency of the chemist, means by which we can annihilate the pangs of the most painful manipulations of surgery, and obviate the tortures formerly incidental to all operative procedures. In the face of such a fact as this, we may be pardoned if we express a doubt whether we have arrived at the limit of our therapeutical discoveries. There is, I think, a favourable circumstance in connexion with our profession at the present time which is likely not only to have a beneficial influence on its actual advance, but with reference to the estimation in which it will be held by the public at large. Resting, as it does, on a basis of scientific observation, and depending for its progress on scientific researches, it will meet with more and more recognition in proportion as it appeals to a public which is more and more scientifically educated; and we now see that physical science is assuming more and more its proper position in the education of the young. Whilst I would express a hope that, in the general education of the people, and especially of those who are in the higher walks of life, the cultivation of literature in its widest sense will always maintain a due prominence, I trust that the movement which is now so perceptible with regard to the teaching of physical science will continue to meet with that support which I think it so fully deserves; and in connexion with this subject I cannot but express the satisfaction which I, and I am sure I may say we all, have felt in seeing rise up, in the various great centres of population in this kingdom, those institutions for higher education which add so much to the teaching power of these centres. Since we met in Liverpool, as I have already said, nearly a quarter of a century has elapsed; and by the gaps which time has made in our ranks, and the fact that the Association is now re-assembled here, we are reminded that, whilst individuals pass away, societies and communities may remain. I trust that the time is far distant when our Society will show any symptoms of degeneracy or decay; but in its very magnitude and its great prosperity there exists an element of danger. I have, however, the strongest possible conviction that the wisdom of the Association, guiding and directing its executive body, which shall be at once the representative and the reflex of the whole constituency, will conduct the Society safely through the dangers and difficulties which may beset its path. Looking to the results which have been achieved, I feel warranted in saying that, with our present advantages, and working from our present standpoint, we have every reason to believe that the progress of medicine in the future will be marked by more rapid strides than those which have characterised it in the past; and, standing here to-night, I can look forward, with confidence, to the time when a future president of the Association, inaugurating the centenary of its birth, shall speak with triumphant voice and in glowing language of the advances which our profession shall have made. He shall tell of improved methods of research, and new instruments of diagnosis. He shall speak of the important generalisations which the collective investigation of disease, carried on for fifty years, has led to. He shall point to the greater facilities with which the differentiation between functional disturbances, and the early symptoms of organic disease may be effected. He shall, perhaps, be able to show how many affections which ultimately lead to great alteration of structure, and eventually to a fatal issue, have their origin in functional disarrangements neglected in their beginnings, and gradually inducing changes which at length become irremediable; and thus he shall show how closely physiology and pathology are connected. He shall, perhaps, be able to point to the establishment of the true pathology of those diseases which from recent investigations appear to be dependent on the presence of micro-organisms, of tuberculosis, and other allied affections, and, as a result of this, he may possibly tell that, by the adoption of a practice analogous to that which has had so marked a result in reference to splenic fever and chicken-cholera, and which has rendered famous the name of Pasteur, an almost complete immunity is enjoyed from those terrible

maladies which have hitherto in large measure baffled the skill of the most accomplished physicians. But if the results to which I have alluded, and the advances which I have ventured to foreshadow, are to be realised, if medicine is to be raised from the region of empiricism, and to be placed on a higher scientific level, and if we in this country are to take our part in the researches by which the great problems now awaiting solution are to be determined, then must all unwise legislative restriction on the work of the physiologist and pathologist be withdrawn; then must all measures which fetter the action of the original investigator be removed; and I trust that, by the labours of the Society which has been established for the cultivation of medicine by original research, a more enlightened public opinion will be formed, which will aid in bringing about these results.

On Wednesday, at 11 A.M., Mr. REGINALD HARRISON delivered

The Address in Surgery.

Mr. Reginald Harrison, after thanking the Council for the honour conferred upon him, said:—Surgery, I need hardly tell you, has long been cultivated in the new city which has now the honour of receiving you. The hospitals of Liverpool, and their records, show that the same ardour prevails here as elsewhere, both at home and abroad; whilst its position as a school of surgery indicates that it has entered, not unsuccessfully, into honourable rivalry with its competitors. It seems to me that one advantage connected with the itinerant character of our meetings is that places suggest references to local celebrities of the past whose works cannot be thought over without advantage. Henry Park was Surgeon to the Royal Infirmary from 1767 to 1798. I cannot do better than quote a passage which our local historian, Sir James Picton, has selected (*Edinburgh Review*, October, 1872) as paying a deserved tribute to his memory: "In the latter portion of the last century, when a vigorous flash of originality seemed to light up the annals of surgery, Park, of the Liverpool Infirmary, may be said to have accomplished the first act of conservative surgery. His patient being a sailor, to whom the loss of a foot and leg would have been tantamount to the loss of his means of getting bread, determined him to make the experiment of simply excising the diseased part—the knee-joint—and retaining the foot and leg. This he did so successfully that, to use his own words, the patient some years after the operation 'made several voyages to sea, in which he was able to go aloft with considerable agility, and to perform all the duties of a seaman; that he was twice shipwrecked, and suffered great hardship without any further complaint in that limb.' This was a crucial test of success, that should have stamped the operation as one of the greatest surgical triumphs of the time." Of Mr. Alanson, Park's colleague, and Surgeon to the Royal Infirmary from 1770 to 1794—whose work has been aptly referred to by Mr. Sampson Gamgee as "one of those forgotten surgical classics which I would venture strongly to impress on the attention of my younger brethren"—I will speak in the following passage from the Presidential Address of the late Dr. Vose, delivered on the last occasion this Association met in Liverpool: "To Mr. Alanson, formerly a surgeon to our Royal Infirmary, we are indebted for many important suggestions, made at a time when the science of hygiene was but little regarded anywhere. His remarks upon the ventilation of hospitals, the use of iron bedsteads, the necessity of frequent whitewashing, and the establishment of sanatoria in the pure air of the country for convalescent patients testify to the correctness of his professional judgment, and to his zeal for the welfare of his fellow creatures. It is by his treatise upon amputation, however, that the memory of this gentleman, as an original thinker in surgery, has the strongest claims to our gratitude and regard. He tells us that, among upwards of forty amputations performed upon the old system, which had come under his notice, ten died of tetanus, two of bleeding, three from mortification, four from exhausting suppuration; while eighteen experienced hæmorrhage, and nearly all had excessive fever. Most of the patients suffered from exfoliation of bone, conical stumps, or wounds that would not heal. After the adoption of his improved method of procedure, he had the satisfaction of being able to announce that, out of upwards of thirty amputations, taken indiscriminately, which were performed at the infirmary, not one died, and none had secondary hæmorrhage; while, in a month after operation, the wound was, either altogether or as nearly as possible, healed in all the cases." As is well known, in Alanson's method of amputating, provision was made for the covering in of the bone after its section by the integuments. Such, then, are illustrations of the useful work which was being done by surgeons in this comparatively modern city about 100 years ago. In considering the history of surgery as detailed in Mr. Stokes's admirable address, the thought naturally occurs that its diffusion is as remarkable as its progress. Compare, for example, the condition of surgery prior to the existence of our Association with its position as set forth in the columns of our own journal, or in those of the other great representative of medical opinion in this country, THE LANCET. In the former period, departures from the ordinary routine of surgical procedure were confined to a few hands, and the benefits resulting from improved methods of treatment were shared in by a very limited number. Now, no sooner is a method of treatment or an operation proved to be efficient, than it is taken up and practised wherever scientific surgery can reach; the peer is no better off than the peasant, and the cottage-hospital rivals in its successes those obtained in more palatial edifices. I propose to occupy the remainder of the time at my disposal by a reference to some of the more recent advances and work in connexion with the surgery of the urinary organs. A more extended acquaintance with the pathology of the kidney has brought to light conditions in which the work of the physician requires to be supplemented by that of the surgeon. Pain arising from an undue mobility of the organ, tumours, deposits, hæmorrhages, and collections of fluid within it—all these morbid states are now recognised as capable of relief or cure by fixing, opening, or extirpating the abnormal or disordered organ; whilst numerous illustrations have already been afforded of the successful removal of stones from positions where they must have ultimately led to the disorganisation of the kidney in which they had become impacted. We may draw at least three conclusions of value, so far as the operation of extirpation of the kidney is concerned. These are:—1. That nephrectomy has been the means of saving many lives under circumstances where no other method of treatment was likely to be of service. 2. That this operation has been practised in cases where the probability of a successful termination appeared to be very remote. 3. That a method of effecting the removal of the organ different from that which was selected, or a procedure less heroic, might, in some instances, have tended to increase the chances of success. In these directions, then—in selecting cases for operation, in rejecting others as unsuitable, and in determining relatively to the case in question the best method of procedure—I take it that good work has yet to be done. I appears to me that among the difficulties we have to contend with in the application of nephrectomy, two stand out prominently: (1) the kidney it is proposed to remove may be the only one; (2) the opposite organ may be similarly affected, though in a less degree, yet sufficient to interfere with those compensatory changes being carried out which are essential when one excretory organ has to supply a lack of service on the part of another. Till a few years since, the removal of stone from the bladder by crushing had been conducted on the lines laid down by Civiale some half-century ago. Though this method of proceeding has included among its advocates, past and present, surgeons of eminence, it cannot be said that, as then practised, it was either gaining ground or confidence. Indeed, I think I may say there was an increasing tendency to limit its application and to substitute lithotomy in all cases but those of the simplest kind. The mortality consequent upon the retention of broken calculi within the bladder was sufficient to induce all but the most ardent admirers of lithotrity to hesitate to give it the preference over a proceeding in which, whatever might be the risks, there was at least a guarantee that the whole of the stone had been removed. Whilst the surgical mind was thus to some extent in doubt as to the limits to which the crushing operation of stone might safely be pushed, two important communications followed rapidly upon each other. The first of these papers was by Dr. Otis, of New York, who demonstrated beyond all reasonable doubt, and in a manner which had not previously been attempted, that the male urethra was capable of safely receiving far larger instruments than were generally employed. Following upon this, and probably influencing the views of the author, came Dr Bigelow's paper on the removal of stone from the bladder by crushing and withdrawing it at a single operation; the latter communication

clearly showing that the bladder was tolerant of much more prolonged manipulation than had previously been believed. That Bigelow's method of procedure is a great step in advance—that it has extended the limits of lithotrity and curtailed those of lithotomy—there cannot be the least doubt. But to suppose that it is capable of universal application, or ever likely to be so, is as unreasonable as to suppose that the art of surgery in no way differs from the art of administering Holloway's pills. But does the lithotrity of to-day represent the finality of its perfection? I trow not. One word in reference to lithotomy before I leave the subject of stone. There is no great operation in surgery, I believe, which furnishes more successful results than this. Taking the experience of the two hospitals in this city with which I have been associated, I find there have been within my recollection 102 cases of lithotomy in persons of all ages, but chiefly in children, and operated on either by my colleagues or by myself. In only five of these cases could I ascertain that a fatal result followed. My late esteemed friend, and our former associate, Mr. Southam, speaking of his own experience of lithotomy at Manchester, informed me that he had operated 120 times, and could only recall one death. In the great majority of the Liverpool cases the stones were not exceedingly large, and I have no doubt that many of them might have been removed by lithotrity. I question, however, whether the small mortality these figures indicate would thereby have been still further diminished, even if the calculation were made on a basis corresponding with the most successful statistics in lithotrity that have hitherto been obtained. Sir Henry Thompson has done good service in giving prominence to the employment of digital exploration of the bladder, and in furnishing illustrations of the great advantage that this proceeding is capable of affording in suitable cases. From a consideration of some of the extremely valuable records which have been published by various surgeons, where the bladder has been opened for the removal of tumours, it appears to me that it might have been better had the operative proceeding terminated with the detection and exploration of the growth by the finger. The chief dangers which experience has shown to be liable to attend the performance of this class of operations, are:—1. The chance of rupturing a bladder, the coats of which have been rendered less resisting than natural. 2. The provocation of a hæmorrhage which it has been found difficult to control. 3. An incomplete removal of the growth. On the other hand, an examination of many tumours of this kind, of which villous growths or tufts furnish the best examples, shows that there is nothing in their connexions or relations which need necessarily interfere with their complete removal. Precise information as to the presence and attachments of these growths we may now obtain with comparative safety. Whether their removal is to follow upon their discovery will be a matter for further consideration. I now come to speak of the prostate, and I shall do so in reference to the part it takes in obstructing micturition, for the reason that it is this symptom which, in some form or other, brings the patient under our care. It appears to me that enlargement of the prostate is specially interesting to us in relation to its earliest and to its most advanced forms, and it is to these that I shall more directly refer. If we take the obstructive disorders of the urinary apparatus, and inquire what feature of them is most detrimental to the associated parts, the answer undoubtedly will be, the misdirection of the muscular force that is thereby entailed. How can we explain the structural alterations which take place behind the obstructed point, and which manifest themselves in different ways, except as the results of urinary retention and retrograding pressure? How frequently do we find, in cases of stricture or enlarged prostrate, that the whole of the apparatus behind the primary constriction consists of little else than dilated saccules and tubes. Is not this distinct evidence of back-pressure going on, though it may be imperceptible, from the moment that the impediment arises to the escape of urine from the bladder? The more we study animal mechanics, either in their physiological or pathological application, the more can we appreciate the truism that force is never lost. If it is not permitted to act for good, it must be productive of evil; if it is not exerted towards the legitimate fulfilment of a normal act, it must inevitably exercise a corresponding pressure in an abnormal direction. Such considerations as these have long led me to believe that our treatment of prostatic stricture—or by whatever name we know it—commences, as a rule, far too late; we delay until the bladder shows, by the formation of a pouch, or a saccule, behind the prostate, the first bad influence of back-pressure before we seek to rectify it. I have endeavoured to prove how much good may be done by the adoption of judicious mechanical treatment on the appearance of indications that the prostate is commencing to obstruct micturition, and I have founded my suggestion upon a condition which may be seen illustrated in any museum—viz., one in which, though the gland has become large, obstruction has not been known to occur. An extended adoption of this practice has convinced me that the pressing symptoms connected with an enlarging prostate may be kept in abeyance by the timely employment of those principles of treatment which are generally recognised as being applicable to any tubes within the body which are threatened with occlusion and are within our reach. In the more advanced forms of prostatic enlargement, where the bladder has been converted into a receptacle little better than a chronic abscess in which urine stagnates, surgery has done much to afford relief. When the comfort that catheterism is capable of affording has ceased to be effectual, other plans of establishing a drain for the urine are at our disposal. Let me say a few words in reference to two which have more recently come under notice: these are—first, incision into the bladder from the perineum; and, secondly, paracentesis through the enlarged gland. For the purpose of securing a more or less permanent channel for the escape of urine from the bladder, other than by the urethra, I must admit that, following the practice of Syme, and to some extent of Edward Cock, I have a decided preference for an incision through the perineum, on the twofold ground of safety and comfort. I may be permitted here to submit to your notice a method of puncturing the bladder through the enlarged prostate which has afforded very gratifying results. It consists in passing the trocar through the gland, and retaining it in the perineum, so as to afford a permanent as well as a convenient drain for the urine. I should have had more diffidence in commending this operation to your notice had it not received the approval of our distinguished associate, Professor Gross, whose contributions to the surgery of the urinary organs are held in deservedly high repute on both sides of the Atlantic. Though the primary object of cystotomy, as usually practised, is merely to place the bladder at rest by providing a continuous drain for the urine as well as the products of cystitis, it occurred to me, as it had already done to others, that it would be possible to extend this proceeding, with the view of removing those barriers to micturition which the hypertrophied gland so frequently presents. It was to meet conditions such as these that Mercier introduced and practised division of the prostatic bar by means of a cutting instrument introduced along the urethra. This plan, though admirable in its conception, was open to the objection that in its execution it was necessarily uncertain, there being no means of surely ascertaining that the section was confined to the obstruction to be removed. On carefully considering the position of matters, it appeared to me more reasonable to attempt to divide the prostatic obstruction at the neck of the bladder from an opening made into the membranous urethra, than by means of instruments which had to traverse the whole length of the canal. I have recently brought under notice a case in which I thought it desirable to explore the prostatic urethra from an opening made in the perineum, and through which I was enabled to divide with precision a prostatic barrier. The division of this portion of the gland was followed by complete restoration of the power of micturition, and has so far proved of permanent advantage. The proceeding which I have thus put into practice seems first to have suggested itself to Mr. Guthrie, but I cannot find that he ever employed it. That it is not identical with the somewhat extensive incision of the prostate as for lateral lithotomy, which was practised by Sir William Blizard, is at once obvious. Its aim is to divide the obstruction—and the obstruction alone—by an opening so planned as not to expose the patient to undue risk; whilst, at the same time, it is capable of affording the greatest amount of room for manipulation by an extension of the incision, should this be found to be necessary. I need hardly observe that a proceeding of this kind should be undertaken before the bladder has passed into a condition of confirmed and irremediable atrophy; otherwise, though we may succeed in removing an obstacle to the introduction of the catheter, our prospect of restoring the power of micturition will be as hopeless as it has proved to be under somewhat similar circumstances where the operation of lithotomy has

been undertaken. Though the literature relating to either complete or partial excision of the prostate is very limited, there is much in it of promise. In one case, where I extirpated the whole gland for malignant disease, the benefit that followed far exceeded my expectations. Passing to the urethra, I would again to the value of Otis's work in regard to the dimensions and dilatability of this canal. I cannot, however, follow him in his views relating to the performance of internal urethrotomy as a means of treating stricture of the urethra. My impression is that this operation is losing instead of gaining ground in the opinion of many who have ample opportunities of judging fairly of its merits. That it is an operation fitted for the treatment of stricture in its early stage is a conclusion I am disposed to take exception to, on the ground that it is neither necessary nor safe as compared with other methods. I believe that, in its early stage, stricture may be successfully combated by the employment of thorough cleanliness combined with the judicious use of dilatation, as we are accustomed to practise it in this country. If internal urethrotomy gave a greater immunity than other operations from a recurrence of stricture, or did away with the necessity for subsequent mechanical dilatation, then, perhaps, with the view of avoiding other risks to which all persons suffering from stricture are liable, I might feel more disposed to employ it; but, as such is not the case, and the risk attending its performance is not inconsiderable, I cannot concede the importance which is claimed for it by its more ardent admirers. That internal urethrotomy in some cases is a necessity—as by it we are enabled to render amenable to treament a stricture hitherto intractable—I am willing to admit; but to recommend it as capable of effecting a permanent cure is quite another thing. The treatment of impassable stricture of the urethra has received an important addition by the practice which Mr. Wheelhouse has introduced, the great credit of which he seems desirous rather of sharing with his surgical colleagues than of appropriating to himself, as I see he always refers to it as the "Leeds operation." Permit me, without apology, in this mechanical age, where invention after invention for the treatment of stricture comes upon us with marvellous rapidity, to claim a moment's consideration for what Mr. Savory has called the medical aspect of this question. We all know what irritation is: there is such a thing as irritation of a stricture, either by what passes through it naturally or is introduced to correct it. Let us not disregard, as a principle of our treatment, the importance of securing for the urethra that physiological rest of which the late Mr. Hilton wrote so well. I have a strong impression that the times through which we are passing, characterised as they are by the production of great and continuous nerve-tension, have brought into prominence a state of brain-strain which is apt to show itself in any organ which may happen to be deranged or is over-taxed. A recent author seemed rather to conclude that tension of this kind was most injuriously felt and shown by our American cousin, whilst the Britisher, for some reason or other, was less influenced in this manner. Whether this be so or not, I am not prepared to decide, but I am disposed to believe that purely nervous affections—affections associated, as far as we can determine, with no obvious structural alteration—are more common than they used to be. That they occasion much distress, and cause persons who suffer from them to be unduly apprehensive, will be generally admitted. Nay, further, by their mimicry of more certain diseases, they induce a condition of anxiety which is often intolerable. It is well too, to bear in mind that the interpretation of symptoms, as also their prevention and amendment, are frequently to a large extent dependent on a recognition of the possible existence in a patient of exaggerated nerve-tension. I have now done. It has not been my ambition to hold up to you a golden calf; to attempt to dress it in flowers of rhetoric and to ask you to worship it. I have rather endeavoured to remind you of some of the directions in which surgery is now travelling, and to estimate in a measure the pace at which it is going.

THE SECTIONS.

On Wednesday afternoon, at 1.30, the Sections all met, At most of them the presidents delivered addresses.

MEDICINE.

In the unavoidable absence of Dr. Cameron the presidential chair was taken by Dr. F. T. Roberts, one of the vice-presidents of the section. Dr. Gairdner then opened the discussion on aphasia by reading a most instructive, interesting, and not a little amusing paper. The value of various expressions as intellectual propositions was estimated. He remarked how education tended to destroy the use of meaningless expletives. The development of automatism out of voluntary actions was an absolutely necessary physiological condition. Expressed in terms of a law, we might say that there was the degradation of voluntary acts into or towards reflexes. A machinery or mechanism was generated, without which there could be no progress. The remarks of Dr. Gairdner were abundantly illustrated by appropriate cases. With regard to the forensic relations of aphasics, the speaker was inclined to look upon them as not insane nor appreciably weakened in mind, even when language was much restricted. A child born without Broca's convolution must be regarded as practically an idiot. All the medico-legal opinions, however, were merely raised to excite discussion.

Dr. Hughlings Jackson continued the discussion by delivering, in a short space of time, a remarkably clear exposition of his views on the relationship of Dissolution to Aphasia. He believes that before speech proper occurs there takes place an automatic reproduction of words. An idea of a word, considered as entirely apart from the word, was a notion which Dr. Jackson considered had no meaning. Speech is propositionising, and it makes no difference whether the utterances be heard by others or only by the individual who is speaking. An hypothesis was put forward to attempt to explain the possession by some aphasics of phrases or sentences of considerable propositional value. These examples would tend to be antagonistic to the view that in aphasia there was loss of the most recent, least organised, and most specialized attainments, with retention of the next lowest. But if we suppose that this recurrent phrase of high value to be the last centre energised just prior to or at the moment of the aphasic seizure, it might be allowed that the energy of that centre would be continued or even heightened. Such cases might be regarded as samples of verbal monomania or as an instance of a temporary "barrel organ" form of speech disorder.—Dr. Broadbent narrated some interesting cases illustrating various forms of aphasia. His philosophical views are so well known, and his theory has received such general acceptance that there is no need to apologise for not further mentioning them in the limited space at our disposal. Dr. Clifford Allbutt next followed with a lucid account of his physiological explanation of the morbid phenomena of aphasia. Cases of excessive volubility of speech were looked upon as instances of reflex action, in which higher inhibitory centres had lost their controlling act on. It was likened to the rod of a clock from which the pendulum had been removed. Excessive and generally disordered action of speech centre was a performance of no eminent sort, and indicated a low state of action scarcely worthy the name of intellectual. It was as much a reflen act as walking.—Dr. Drummond spoke of some of the varieties of aphasia known as ataxic. Dr. Ross referred to the damage of conduction power as explaining some kinds of loss of speech, and mentioned Dr. Barlow's case of double symmetrical cortical lesion in which there was aphasia closely similar to that met with in cases of bulbar paralysis. Drs. Ireland, Archibald Cameron, and Wahltuch joined in the discussion.—Dr. Althaus read a paper on some post-epileptic phenomena.

SURGERY.

Mr. Bickersteth referred to the sanitary condition of Liverpool, and entered a strong protest against the neglect of quiet in the streets, and the determination of the Council to pave the whole city with square blocks and lay tramway lines along all the principal thoroughfares.

Mr. Rushton Parker then opened the discussion on Intestinal Obstruction by a paper, in which he advanced the same views as those recently referred to in a review in our columns and in Mr. Parker's letter last week.—Dr. Waters (Chester) related five cases of intestinal obstruction treated by operation. Sir Spencer Wells operated in four of these cases, and three of them survived. He advocated opening the cæcum from the right loin, which he said was an easy operation; and the peritoneum was not imperilled.

Mr. JOHN H. MORGAN read a suggestive paper on the Operative Proceedings in Cases of Intestinal Obstruction, and having observed how frequently operation was resorted to at too late a period, urged that surgeons should be agreed upon the details to be followed, and pressed the members for their views on certain points. The advantages of a median

incision in cases of doubtful diagnosis were urged and the exceptions when it should be departed from were named, and an interesting case related supporting these statements. The question of seeking for the cause of obstructfon was discussed, and the suggestion of Dr. Kingston Fowler in a paper in THE LANCET of June 30th was quoted, and its value pointed out. The mode of dealing with the causes of obstruction was then discussed, as well as that of dealing with the dstended intestine, which it is often so difficult to return into the abdomen. How to deal with intestine in a gangrenous condition was next considered, and the question between suturing the ends of the sound gut or the making an artificial anus was considered. The successful cases in the practice of foreign surgeons were quoted as an incentive to adopt the former plan, especially when the upper part of the small intestine was concerned, and in conclusion it was urged that better results might follow more accurate diagnosis and earlier operation, but the desirability was pointed out of a careful study of details, and the hope was expressed that on some of the points named in the paper useful information would be given by the members present. — Mr. Oliver Pemberton urged that exploratory operations in cases of uncertain diagnosis were not justifiable, that, indeed, they might take away the sole chance of life.— Mr. Pearce Gould insisted that intestinal obstruction was only a symptom, that regard must always be paid to its cause, and that it would not be well to group them all together under one common heading. What was required was early and accurate diagnosis of the cause, and then the treatment of the cause. Where this was mechanical, mechanical means of treatment must be employed. Where vital, as in cases of paralysis of gut, in peritonitis and enteritis, vital means, as rest, must be relied on. For purposes of diagnosis he thought rectal examination was both justifiable and useful, and he referred to cases of intussusception in which cure had been brought about by injections of fluids or air. — Mr. Lawson Tait had had considerable experience in the operative treatment of intestinal obstruction; he had never regretted operating, but he had often had cause to regret not operating. He thought accurate diagnosis was impossible, and he operated to make his diagnosis. He had often failed to find the obstruction when operating, and he now prepared at once, on opening the belly in the middle line, to open the presenting coil of distended gut; and after this simple procedure he had had several cases of cure of the obstruction, and had subsequently closed the artificial anus. He had often operated on account of peritonitis. — Mr. Bennett May remarked that there were cases which simple interotomy would not cure, as internal strangulation and volvulus. He preferred to find the seat and cause of obstruction, and act accordingly.—Mr. Edmund Owen thought that Mr. Tait's experience was exceedingly useful, and that his teaching removed the great difficulty which had been felt before of making a diagnosis of the cause of the obstruction. —Mr. Symonds objected to Littré's operation, and to simple enterotomy, for they were not curative, and the surgeon's duty was to cure and not only to relieve. He thought that diagnosis was often possible, and should always be attempted on opening the belly. He first examined the cæcum to see if that were distended; if not, he looked on the right side in the common position of bands, and failing to find anything there, he then examined the cæcal end of the ileum, and explored the small intestines from that point up. — Mr. Parker, in his reply, said that his remarks applied only to the preliminary stages of obstruction, that where the symptoms got worse, he should certainly advise operation, but what he deprecated was the giving of purgatives and good and rough physical examinations at once, before it was certain what course the case would naturally take.— Dr. J. W. Browne read a paper on forty-four cases of operation for strangulated hernia. His mortality in hospital practice had been 25 per cent., in private 18 3 per cent. Three of his cases had been strangulated sixteen, fourteen, and twelve days respectively. He recommended that the sac should be opened in all cases of femoral hernia, as omental sacs are so common in that variety. He exhibited Paterson's hernia knife.—Dr. E. S. Bishop described the various clamps used in the performance of enterectomy, and showed one which seemed well adapted for the purpose.— Mr. Jordan Lloyd and Dr. Coats both urged that the mortality attending strangulated hernia was due to delay in operating, and their own rule was at once to administer an anæsthetic, try careful taxis, and if not successful at once to operate.

Dr. J. Ward-Cousins showed a new form of surgical needle for wire sutures, in which the needle is directly continuous with the suture made from the same piece of metal. Also, photographs of a case of enormous fatty tumours on the back, which caused great pulmonary and cardiac distress, and which he removed, with relief of the symptoms.

Mr. Bartleet showed a patient on whom, in January last, he performed Roux's amputation at the ankle. The result was an excellent stump.

PATHOLOGY.

In this Section, Dr. T. HENRY GREEN, in his address, said:—In considering the prosecution of our work, the number and the complexity of the pathological problems which remain to be solved, some of which, from the gravity of the issues they involve, are, even at the present moment, assuming so much importance that both the profession and the public are anxiously waiting for the truth, we cannot but recognise the difficulties with which we are surrounded, the responsibility which rests upon our decisions, and the attitude of scientific criticism which it becomes us to assume. Of the threefold source of our knowledge of disease—observation after death, observation during life, and pathological experiment—that first named has undoubtedly received the most attention. Morbid anatomy has ever been a favourite study with the junior workers in our profession. It is natural that it should be so; for our work is more capable of demonstration, and for the most part beset with fewer difficulties, than are the other methods of investigation. Let us beware, however, lest we attempt to give to it too great a prominence. I cannot help thinking that there is at the present time rather a danger of erring in this direction. We are now beginning to learn, and to appreciate in all its important bearings, the fact that different diseased processes may produce the same structural change; that histological similarity does not necessarily imply pathological identity. There is another matter connected with this branch of our subject to which I should like to allude—the study of disease as we meet with it in the post-mortem room, apart from minute histological investigation. It is unnecessary, in such a meeting as this, to insist on the importance of post-mortem examinations. There is, perhaps, a danger of the medical student spending too little time in the post-mortem room, and prosecuting his work too exclusively in a room supplied with section-cutters and various dyes. I shall not be accused, I believe, of underrating the value of the study of microscopical changes, but I wish to insist upon the importance of endeavouring to familiarise ourselves with the macroscopical alterations with which they are associated. The value of pathological experiment as a means of increasing our knowledge of disease it would perhaps be difficult to over-estimate. How much it has done in the past, and how much may we expect of it in the future! And yet experimental pathology is at present only in its infancy, and the obstacles to its development in this country seem to be almost insurmountable. Great, however, as is the value of pathological experiment, we must never lose sight of the fact that its results must be submitted to the criticism of the clinical pathologist before they can be accepted as applicable to disease. Experimentation on the lower animals, however great may be the precautions taken to exclude error, is open to so many sources of fallacy, that even when its results are utilised wisely for the purpose of explaining disease in the animals themselves, much uncertainty is unavoidable. But when these results are applied to disease in man, the sources of fallacy become so indefinately multiplied that deductions from them are almost valueless unless the conclusions arrived at are more or less in accord with those justified by other methods of observation. Clinical facts, remember, are as much facts as are histological or physiological ones, and they can never be lost sight of in pathological generalisations without prejudice to the truth. If we take three such common diseases as broncho-pneumonia, pneumonia, and phthisis, and inquire into our knowledge of their pathology, we shall see how the several methods of investigation have contributed to this knowledge, and how unwarrantable is any attempt to generalise from one method to the exclusion of others. Firstly, of broncho-pneumonia. The conclusion that in a case of bronchial catarrh, the occurrence of broncho-pneumonia is, for the most part, due to the supervention of pulmonary collapse, is warranted by the several methods of observation we have been considering; and the importance of keeping this pathological

teaching in view, in the prevention and treatment of this disease, it would be difficult to over-estimate. In the case of simple pneumonia, however, it is otherwise. We have yet to learn the nature of the disease, and the circumstances under which it originates. Post-mortem examination has, perhaps, revealed most that it is capable of teaching; pathological experiment may still throw some light; but probably to clinical observation—such collective investigation, for example, as is now being carried out under the auspices of this Association—we must mainly look for the further solution of this pathological problem. And now we come to phthisis. The teaching of pathology respecting phthisis justifies, I think, the following three propositions. 1. The morbid processes which lead to phthisical consolidation of the lung are inflammatory in their nature, by which it is simply meant to imply that they owe their origin to some kind of injury of the pulmonary tissues. 2. Phthisical consolidation of the lung differs from most other forms of pneumonic consolidation, inasmuch as it exercises an injurious influence upon the adjacent and distinct pulmonary tissues, and thus tends to spread. To this infective property, which varies very considerably in different cases and under different circumstances, the progressive character of phthisical consolidation is largely due. 3. The infectiveness of phthisical consolidation is, in all probability, due to changes in the inflammatory products, for the occurrence of which the presence of organisms is a necessary condition. Koch's investigations seem, therefore, to supply the element that is wanting to establish the truth of our pathology as far as it has gone—they discover the organisms, the existence of which had been foretold. But they do much more than this; they appear to prove that the organisms are specific. This, if true, is undoubtedly a most important additional link in the still incomplete pathological chain, and our previous knowledge of the pathology of phthisis is, as it seems to me, rather in favour of than against its acceptance. It would appear, therefore, accepting provisionally the truth of Koch's investigations, that two conditions, at all events, are necessary for the development of phthisis—the presence of the tubercle bacillus, and something, inherited or acquired, inherent in the individual. About the latter there can be no reasonable doubts, and although the evidence respecting the former is still quite incomplete, and we must await further and perhaps prolonged investigations before admitting the necessity of an organism from without, our present knowledge, both pathological and clinical, appears to present nothing exclusive to the probability of its truth. What then, I would ask, in bringing these few remarks to a close, is our duty with regard to this all-important subject? In the treatment of phthisis, whilst never losing sight of the conditions inherent in the individual, should we not recognise the probability that there may be something introduced from without? In attempting to prevent the disease, is not the question forced upon us—How far is it justifiable to allow individuals who are not consumptive, but who inherit a phthisical tendency, and especially when such individuals are out of health, to intimately associate with those who are already suffering from this disease? Such questions as these are now coming prominently before us, and in endeavouring to answer them we must look to pathology as our guide. If I read her aright, she is, I think, pointing in the direction foreshadowed by Klebs and Koch, and is asking us, those engaged in the practice of our profession, not only to help her in the attainment of the truth, but also, in the meantime, to act up to her light and to use her, even in her incompleteness, for the good of our fellowmen.

Dr. Dreschfeld entered into a very complete historical summary of the whole question of micro-organisms, and this able opening was followed by a short paper on Micro-organisms in Typhus by Drs. Mott and Blore. Mr. Victor Horsley began the discussion in the question of the relation between simple acute abscesses and micrococci, as well as between the latter and pyæmic foci. It was shown that the microbes had a different relation to the bloodvessels in the two cases.—Dr. George Thin still doubted whether healthy tissues contained micro-organisms, and gave his experience with staining fluids. He found that there was much variation in their behaviour, according to apparently trivial circumstances.—Drs. Shingleton Smith, Niven, and Barron joined in the debate.

In connexion with this section, we cannot too highly praise the care with which a multitude of macroscopic, microscopic, and diagrammatic illustrations were brought within visual reach of all the members. A copy of the coloured diagram of pathogenic organisms, by Drs. Mott and Barron, was presented to each member attending this section.

PHYSIOLOGY.

In this Section, Mr. E. H. SCHAFER remarked as follows:—The subject which I have selected to bring before you in this Section is the Structure of the Animal Cell. In the first place, let us consider the views which were formerly held regarding the structure of the animal cell. The earliest notion was that expressed by its name, a hollow space enclosed by firm walls. The space was occupied by fluid, which might contain granules. The most conspicuous fact in this idea of the cell is the importance of the cell-membrane. This did not serve merely to enclose the fluid contents of the cell; it had a direct relation to nutrition and growth. Given such structural conditions—a vesicle filled with fluid, and enclosed by a structureless membrane—it was not easy to understand how changes were brought about in the cell contents, although the occurrence of such changes was not to be ignored. The establishment of two important facts led eventually to the overthrow of the vesicular theory of cell-structure. One was the existence of cells without an envelope. Its existence in them was merely assumed. The second fact was the exhibition by cells of those peculiar and indefinite changes of shape which are known under the name of "amœboid movements." Histologists were therefore fully prepared to receive a new definition of the animal cell, when, in 1861, Max Schultze clearly showed that the vesicular theory must be replaced by a totally different idea. It was demonstrable that in many instances no membrane exists; it was also demonstrable that the cell-substance is in most cases not fluid, but composed of the soft contractile substance already known as protoplasm or sarcode. A clump of protoplasm enclosing a nucleus is for the future to be looked upon as sufficient to constitute a cell. But what, after all, is this protoplasm, upon which the attention of biologists is now concentrated, which performs so many and such various functions, and which is recognised as the living substance *par excellence?* The second picture of cell-structure, which I have presented to you is the one with which we are most of us familiar; the speck of protoplasm enclosing a nucleus, devoid of structure, but capable of varied functions. I will now invite you to consider a third picture, which has been gradually developing during recent years, and which at the present moment bids fair to supplant the other. Imagine a round soft sponge, the horny skeleton replaced by soft contractile substance, the interstices occupied by fluid, a spherical vesicle embedded at one part in like substance, and you have at once an idea of the most modern view of cell-structure. Suppose, further, the network or spongework capable of contracting so as to express fluid from the meshes, or expanding so as to admit more fluid into them; suppose granules of various kinds to be floating in this fluid, and to be moved from place to place within the cell, by the currents caused by such contractions; suppose materials formed within or imbibed by the cell to accumulate in this interstitial fluid, ready, as in many secreting cells, to be discharged from the cell by the contraction of the network (in obedience to an excitation operating either directly upon the cell, or indirectly through the nervous system); even suppose in ciliated cells rhythmic contractions of the network acting upon the bases of the cilia, which are prolonged into the cell, and in this way causing to-and-fro movements of the projecting cilia—given this structure combined with the contractile function, and in a comparatively simple fashion many of the phenomena of cell-activity can be explained. In cells which have become highly specialised as to function there is every probability that some specialisation of structure will ere long become manifest. And such we accordingly find. Without unnecessarily multiplying examples, I may instance the fibrillation of muscular fibres, both voluntary and involuntary, the fibrillation of nerve-cells and fibres, that of many ciliated cells, of some secreting cells, and even the convoluted filaments in the cartilage-cell already referred to. Of the pre-existence of these structures there is no reasonable doubt, but they are not of general occurrence, and it is neither possible nor permissible to infer from them a definite and uniform structure for all protoplasm. The structure of the nucleus has been no less an object of recent investigation than that of the rest of the cell, but there is a much greater agreement amongst histologists with regard to it; and its consideration need not detain us so long as that of the cell-protoplasm. The original idea of the nucleus

was a spherical vesicle, bounded by a definite membrane. The membrane encloses a fluid and separates this nuclear fluid from the fluid contents of the cell. In the nucleus fluid there are discovered one or more round solid particles —nucleoli. Therefore a cell consists of a nucleolus in the centre; outside this a membrane forming and enclosing the nucleus; outside this another membrane enclosing the cell contents and forming the cell.

DISEASES OF CHILDREN.

Dr. S. GEE delivered the presidential address in this Section, taking for his topic the literature of Diseases of Childhood. He referred to Hippocrates, who first described "mumps;" Rhayes; Phayer; Glisson, who wrote on Rickets; Ste. Marthe, Tansillo, Pernell, Boot, and Whistler, whose supposed academical disquisition of 1645 he considered "but another of Whistler's frauds," and Sydenham, who first described whooping-cough, chorea, scarlet fever, and measles. At the beginning of the eighteenth century, teeth and worms, like two inauspicious planets, still ruled the sphere of children's diseases. And mark the simplicity of this pathology: "Until two years or a little later children are breeding their teeth, afterwards worms become common, so that between the one and the other we never need to fail for a diagnosis." In the eighteenth century, Blair, Home, and Field described croup and spasmodic croup, Whytt discovered tubercular meningitis; Fuller and Heberden described chicken-pox, and Jenner wrote on cow-pox. In the nineteenth century literature has become too immense to chronicle, but Dr. Gee referred particularly to Laennec, Bayle, Bretonneau, Duchenne, Willan, John Clarke, W. C. Wells, Burne, Gregory, and Bowditch, and to the introduction of the thermometer, ophthalmoscope, and laryngoscope. Dr. Gee thus concluded: "Looking over the names of the men whom we have celebrated, the men who have made our knowledge what it is, I do not find one who could be called a specialist in children's diseases, but the multitude are mad after specialities. No wonder; for we are the descendants of those who, in their sickness, worshipped fetishes and charms, or sought after stargazers and the touch of kings. Our children will deem us to be in other respects no less simple. Besides, it is a true saying that 'the world suspects a man who can do two things well.' As the poet says:—

> 'One science only will one genius fit,
> So vast is art, so narrow human wit.'

But art is not yet so vast, or human wit so narrow, that the diseases of children need be made a specialty; and, I believe, that few or none of us are specialists in the popular and evil sense of the word. For my own part, if I may speak so much of myself, being physician to a hospital for children, and to a much greater hospital for people of all ages, I can see that my knowledge of children's diseases would be much poorer and meaner than it is were it not for the larger experience I gain at St. Bartholomew's. I wish that the governors of the general hospitals would make more provision for sick children, and then the need for special children's hospitals would pass away."

Dr. T. Barlow in introducing the discussion on rheumatism and its allies in children, said that it would appear that the best way of arriving at a clinical conception of rheumatism would be to consider a typical case of rheumatic fever, and to study in any such case the sequelæ, the relapses, and the recurrences, especially the lighter ones, of that affection. To compare such case with a series of others, and by keeping records of the life history of these samples, not only subsequent but antecedent to the febrile attack and of the ailments which are unduly frequent when compared with their average incidence on the whole population so as to elicit not only what is common but what is special to the cases investigated. A brief account was next given of those conditions which may simulate and be mistaken for rheumatism. Congenital syphilis manifesting itself as a pseudo-paralysis of a part of a limb occurring in a child about three months old; hæmophilia; tetany, with redness and swelling of the neighbourhood of a joint; scorbutic cases which possibly never actually involved a joint; effusion into a joint associated with infantile palsy, were all described as possible to be mistaken for rheumatism. Dr. Barlow had seen scarlatinal rheumatism as a complication, and not a sequela, set in as early as the third day of the disease. The post-scarlatinal stage was referred to as the "unstable" period. Uncertainty yet existed as to the precise relationship between the rheumatic manifestations and their possible dependence on septicæmia. Erythemata met with in patients who had shown other signs usually called rheumatic were regarded as of the same nature.—Dr. Oxley then read a paper on a fatal case of chorea in a child aged ten years; although no cardiac murmur was detected during life, yet the post-mortem examination revealed changes in the valvular structures.—Dr. Ashby next analysed twelve cases, of scarlatinal synovitis which had occurred in children. He gathered from the analysis that the post scarlatinal manifestations were of the nature of a septicæmia. In many cases the throat affection was quite severe; some were attended with sloughing.—Dr. Sansom had found disease of the valves in all cases of fatal chorea. He explained the appearance, disappearance, and reappearance of a cardiac murmur, by postulating that swelling of the valves on setting in gave rise to a bruit; when this subsided the murmur vanished, only to recur when the valve became crumpled owing to later changes.—Dr. Mahomed thought that Dr. Barlow had attempted to make rheumatism a narrow clinical entity, but agreed that the term should be used in a clinical sense.—Dr. Rickards, Dr. J. S. Bury, and Dr. Byers contributed some remarks on the relation of chorea, erythema, subcutaneous nodules, and scarlatinal rheumatism to true rheumatism.—Dr. Stephen Mackenzie took, with Dr. Barlow, a broad and wide conception of rheumatism, and was of opinion that when erythemata occurred in patients who had been or were the subjects of high temperature, effusion into joints, and so forth, we had a right to look upon such as of rheumatic origin. He considered that antecedent and subsequent circumstances were quite as important as the present illness in this question. His experience was opposed to that of Dr. Ashby, whose cases, he thought, were of an exceptional kind, and possibly were really of septicæmic nature.—Dr. Barlow, in reply, repudiated the notion that rheumatism was an entity.

OPHTHALMOLOGY.

Dr. Brailey and Professor Snellen introduced a discussion on the tests for Colour Sense and Acuteness of Vision among Sailors. Drs. G. Walker, Fitzgerald, E. Browne, and Shadford Walker took part in the discussion, and the following resolutions to be presented to the Board of Trade were unanimously passed. 1. That, in the opinion of this Section, it is of national importance that a proper system of testing the sight of seamen be adopted. 2. That this system comprise an examination by competent persons of the sharpness of sight of both officers and able seamen, this being at present entirely neglected. 3. That the imperfect examination for colour-blindness to which the Board of Trade at present submit candidates for officers' certificates be revised, and be extended also to able seamen. 4. That pilots be subjected to the same tests under some central authority, in place of the present varying and ineffective system of examination. 5. That anyone failing to pass such examination be excluded for the future from the responsible navigation of a vessel. 6. That in case of all accidents at sea which may be due to defective sight, the vision of all concerned should be made the subject of inquiry by competent persons.

Mr. Spencer Watson read a paper on "Shot-silk appearance of the Retina."

OBSTETRIC MEDICINE.

In this Section Dr. GRAILY HEWITT, among other remarks, said:—I take advantage of this opportunity to present to you a few observations on the question of food in obstetric and gynæcological practice. There are certain terms in general use by the public and by the profession which are often employed in a vague, unmeaning, and indefinite manner, such as "weakness," "delicacy," &c., whereby it is intended to designate a condition very frequently met with, but the essential nature of which is, as my experience has shown me, very imperfectly apprehended. Another conclusion is that the "weakness" is associated with, and caused by, a long-continued inadequate dietary, and that it is essentially what may be termed "chronic starvation." It is a remarkable circumstance that so little as yet seems to have been done in the investigation of the effects of an insufficient dietary, looking at it from the quantitative point of view, although the effects of complete deprivation of food are well known. Thus, in the last edition of Parkes' well-known work on Hygiene, it is stated that little is known on the subject of the effects of insufficiency of food, and the

space devoted to the consideration of this matter is less than one page. The popular impression is that some people do not require so much food as others; and, consequently, important quantitative diminution in the supply often escapes attention. I have to state the important conclusion that a continuous insufficiency of food, or what may be termed a "chronic starvation," more or less intense in different cases, was found to have existed almost universally. Consequently, I have naturally been led to consider chronic starvation as a most important factor in disease, certainly in those classes of cases which have come more particularly under my notice. It will be well to cite a few typical instances. 1. A young married lady, aged twenty-four, consulted me for a severe retroflexion of the uterus, which appeared to have set in shortly after her first labour, some months previously. She underwent treatment for this affection; and, in the course of it, one day her mother came with her, and inquired of me why it was that her daughter had become liable to this affection. I replied that, in all probability, it was due to a previous condition of weakness, and insufficiency of meat as an article of food. "Yes," said the patient, "that is very likely true; for when I married, and could please myself, being very fond of sweets, I took little ordinary food during the first year, but lived chiefly on sweets, and ate little or no meat at all." 2. A young lady, aged eighteen, suffered much from menorrhagia, and her condition became finally one of complete inability for exertion. It was ascertained that this patient had lived regularly as regards her diet, but that her diet consisted principally of bread and puddings; and, having a marked aversion to meat, she had taken very little for two or three years previously; and it is the fact that I was afterwards consulted by two of her sisters presenting uterine symptoms, and with a corresponding history as regards the previous dietary. 3. Again, a young lady of very active habits, but who hardly ever took meat, became very ill after an unusual exertion, was affected with severe sickness, which went on unchecked for nearly a year, and was finally so ill that her life was despaired of. Here, the previous dietetic deficiency was most marked. The patient was finally completely cured, the sickness being found to be a reflex symptom dependent on a uterine displacement. These cases might be multiplied *ad infinitum*. I have been much interested in observing, also, the effects of previous insufficiency of food in apparently predisposing patients to attacks of puerperal septicæmia. In the cases of this disease which I have seen in consultation, I hardly recollect having seen a case where the patient so affected had during the pregnancy, lived fairly well; and the worst cases have been those in which the patients fed badly and insufficiently during the pregnancy, and had been fed on a gruel diet after the labour was over. In cases where severe sickness during the early part of the pregnancy prevents the proper nutrition of the patient, the system is liable to become much impoverished, and an insufficient dietary may be, and often is, the preliminary to a dangerous childbed. With very few exceptions, and those exceptions only tending to prove the rule, it is, I hold, impossible to find patients suffering from chronic uterine disease, who have not undergone at some former period what may be termed a starvation process; and careful inquiry generally elicits the fact that the quantitative deficiency in the diet extended over a considerable period. The period of life during which quantitative deficiencies in the dietary are most common is the two or three years immediately following the arrival of puberty. It is generally admitted by authorities on the subject of diet that nitrogen is the most essential of all foods, and that a certain amount, about 300 grains, should be taken daily. In cases of chronic insufficiency of food, it appears that the diminution in quantity of food most frequently affects the nitrogen. No doubt meat can be replaced dietetically by other foods containing nitrogen in sufficient quantity; but practically, owing to the habits of families, good substitutes for meat are not easy to find. Milk is, of course, a most valuable alternative food; but in these cases of absence of sufficient meat we do not find it has ever been taken in any such quantity as to make up for the deficiency; and the quantity of bread consumed, even supposing it to be pure and of good quality, is in such cases entirely inadequate to supply the required quantity of nitrogen. There are few observations bearing on the subject now under discussion which can be quoted from published works. Professor Voit (*Untersuchung. der Kost*, Munich, 1877) mentions an interesting fact. In a public institution, a home for girls, in which, he reports, the diet included an average quantity of 170 grains of nitrogen only, the girls appeared healthy, but their muscles were found to be weak, and menstruation was found to be delayed in many cases until the sixteenth or seventeenth year. It is now some sixteen years ago since I first publicly discoursed on the importance of nutrition in the treatment of disease. I have made it the basis of my practice for some years past, and four years ago I described the condition to which I have now again referred as "chronic starvation." In the United States, Dr. Weir Mitchell has employed a system of rapid feeding, assisted by massage and electricity, for the cure of weakly nervous sufferers, a system which has been found most successful, and Dr. Playfair has done good service in introducing Dr. Weir Mitchell's method into this country. The method in question is essentially a rapidly acting means of introducing nutritive material into the system, and it is dependent for its success on the fact that the principle of the curative influence and action of food is adequately recognised. It is probable that it will be found, on further investigation, that particular deficiencies in the dietary result in deterioration of particular tissues of the body. The conclusion which is obviously suggested by the foregoing considerations, is the necessity for a greater attention to the question of diet, in the bringing up of families, than appears at present to be given to it. We all know that health and a good appetite usually go together. But it seems to be too frequently the case that, when the appetite is absent, such absence is taken as a matter of course, and receives no notice. It results from what has been stated, that absence of appetite may lead to most serious results. It is not immediately dangerous, but it is the first step possibly in the downward course. A continuously bad appetite constitutes a grave condition, and should be seriously regarded.

PSYCHOLOGY.

In this section Dr. T. Lawes Rogers drew a parallel between general hospitals and those specially instituted for the treatment and care of the insane. He asserted that modern science ought to be able to bring about more recoveries; and secondly, that a better use might be made of those he had described as partially recovered, than by keeping them shut up in asylums for the rest of their days. Insanity occurring as an idiopathic disease in a subject otherwise healthy, and without a strong hereditary predisposition, is as curable as any other acute disease; but when it is merely one among many signs of an altered constitution, the prospect of recovery is proportionately small. In but a few of the post-mortem examinations made in asylums is the brain found to be the only organ diseased, and the changes in this are often, except in certain recognised forms of disease affecting the mind, so slight as not to be detected by the naked eye; and, in fact, far greater changes may be found in the brains of those who have died not insane than in recognised lunatics; as in the insane themselves the extent of coarse brain-disease is often not commensurate with the degree of psychical disturbance. Of really specific remedies, few are known in medicine; and certainly the search after those capable of curing mental disease has been like that of the alchemists of old for the "philosopher's stone." The general use of narcotics has been characterised as chemical restraint by one of our most vigorous and accomplished writers; another eminent physician, in an address delivered before this Association, likened the action of bromide of potassium to the performance of a pugilist, rather giving the preference to the pugilist. Should, then, all narcotics be discarded from lunacy practice? By no means; but relegated to their proper position as adjuvants rather than as specifics; as useful remedies for procuring a night's rest for a restless patient, but useless, if not injurious, when given with a view to suppress maniacal excitement, which is, after all, only a symptom of a disease of the nature of which we know but little. In conclusion, Dr. Rogers spoke of the importance of treating lunatics in special hospitals.

OTOLOGY.

In this Section Mr. George P. Field pointed out the progress which had been made in the art of aural surgery during the year. Attention was drawn to the various dangers which might ensue on the presence of chronic otorrhœa, and to the action of the life assurance offices in this respect. The value and efficacy of artificial drumheads, for those who were deaf from mere perforation of the membrana tympani, were illustrated by cases.

Thursday (by Telegraph.)

In the Obstetric Medicine Section, papers were read by Drs. Wallace and Schroder (Berlin), on Total or Partial Extirpation of the Uterus for Malignant Disease. An interesting discussion ensued, which was supported by Drs. Burton, Wynn Williams, Croom, Duke, Le Page, and M'Donald.

In the Surgery Section, Mr. C. Heath read a paper on immediate treatment of fractures by plaster of Paris bandages. He referred to Mr. Gamgee's works on fractures of the patella. The limb should be put up at once in plaster over wadding, and this would prevent effusion and separation of fragments. If effusion had already occurred, the joint should be first aspirated. In fractures of the shaft of the femur, the adjacent joints should not be fixed. He treated fractures of clavicle and upper arm by plaster of Paris over cotton padding and an ordinary vest; fractures of forearm could not be so treated.—Mr. Croft described the plaster of Paris splints he uses, and afterwards gave a demonstration of their mode of application. He uses them in all cases of fracture of the lower limbs.—Mr. Gay and Dr. Maccoll (of America) supported this line of treatment.—Mr. Rushton Parker stated that he now treats all cases of fracture of the olecranon with the elbow well flexed and fixed, and obtains good results.—Mr. Stokes preferred paraffin to plaster of Paris. In many cases he would exclude from such treatment all fractures near joints and very oblique fractures. He preferred the Leeds plan for fracture of patella. Mr. Stokes read a paper on excision of shoulder joint, related cases, and advocated the operation—(1) by the Ollier-Langenbeck method, disregarding the periosteum; (2) removal of as little bone as possible; (3) subperiosteal excision in traumatic cases with extensive injury of shaft of bone; (4) no splints afterwards; (5) Listerian dressing. The statistics were good.—Dr. March described a case of excision of ankle by an artificial Pott's fracture.—Mr. Coats urged early excision of hip as soon as there were starting pains and jumpings not permanently relieved by other means. In late cases the operation was bad.—Mr. H. Morris insisted on keeping the shoulder abducted after excision. Splints should be used.—Mr. Keetley condemned excision of hip; the results were very bad. He preferred to get anchylosis, and correct the bad position by osteotomy.—Mr. Stokes replied that the bad results were due to operating too late.—Mr. Hardie read a paper on amputation by oblique circular incision.—Mr. R. Cross read a paper on treatment of arthritis by incision, and gave the results of 117 cases of diseased joint, in which partial operation was contrasted with early excision. His results had been bad. When the joint is distinctly diseased excision is eventually required, except in the knee, where localisation of disease is generally easy.

In the Section of Anatomy and Physiology the papers were rapidly disposed of. Amongst the papers of interest may be mentioned Dr. Barr's remarks on the causes and mechanism of the cardiac impulse.

The Medicine Section re-commenced to-day with Dr. Drummond's paper on perforating tumours of the Dura Mater. Case showing the destruction of the calvaria illustrated the paper.

In the Diseases of Children Section, at 11 a.m., Dr. Ballard commenced the discussion on the etiology and pathology of summer diarrhœa. After alluding to mismanagement, the use of feeding bottles and artificial foods as popularly assigned causes of the affection, he propounded his view of the general constitutional nature of the malady.

In the Pathology Section, Mr. Symonds read an able paper on the Chronic Inflammation of Bone, introducing the discussion on the subject. It was argued that all the specimens tended to show that no actual expansion of bone could occur; the chief increase of bony deposit was due to the action of the periosteum. The old compact bone becomes converted into cancellous tissue after the addition on its exterior of osteophytic growths; and so the original cortex lost the signs of its recognition.

In the Obstetric Medicine Section a discussion was opened on the Operative Treatment of Uterine Fibromata, in which Dr. Schroder, Mr. Lawson Tait, and Mr. Thornton took part.

At the third and extraordinary general meeting, Mr. Wheelhouse, after referring to the importance of the subject, which was vitally to alter the principles which have hitherto guided the government of the Association, proposed "That the second statutory extraordinary general meeting be held at Exeter Hall, on Friday the 17th inst., at two p.m., at which the special resolutions will be again considered, and, if agreed to, confirmed." The vote was then taken, and the resolution was carried unanimously. The adoption of the report of the collective investigation committee was then proposed by Professor Humphry. After some discussion the report was agreed to, but the words "At the discretion of the committee," with regard to the payments of reports, were inserted.

The Committee of Council was instructed to take steps to ascertain the opinion of the Association with regard to homœopaths as members of the Association.

A very successful soirée was held on Wednesday night at the Picton Art Gallery and Public Museum, at which over 4000 people assembled. The Irish Graduates' Association, the Militia Surgeons' Society, and the meeting of the volunteer medical officers were held.

The Association will meet next year at Belfast under the presidency of Professor Cuming.

POOR-LAW MEDICAL OFFICERS' ASSOCIATION.

At a meeting of the Poor-law Medical Officers' Association held in Liverpool on Thursday afternoon, the chairman, Dr. Rogers, explained, among other things, the circumstances upon which he had been called upon to resign his position as Medical Officer of the Westminster Workhouse, and a resolution was unanimously passed expressing sincere sympathy with him. Another resolution was passed urging on poor law medical officers the propriety of prescribing as little intoxicating liquor as might be found compatible with the safety of the sick, and recommending that no pauper should receive payment in intoxicating drink for work done.

THE CHOLERA.

OFFICIAL CHOLERA CORRESPONDENCE.

A FURTHER letter, addressed by Dr. Mackie, surgeon to Her Majesty's Consulate at Alexandria, on the 15th of July last, to Earl Granville, deals with several matters of considerable interest. It, in the first place, traces the course of the disease during the first half of July along the Damietta branch of the Nile, and subsequently along the lines of railway and other means of human intercourse; but as to most of this the telegrams we have received have already fully informed us. The few cases of cholera which occurred in Alexandria are also dealt with, and up to the date with which the letter deals, it would seem that these were of a sporadic type. Dr. Mackie is not aware that a single case of Asiatic cholera has occurred in Egypt since the winter of 1866, and whilst the Egyptian Government and people still strive to induce the belief that the infection was imported from India, others are inclined to regard the local circumstances of Egyptian towns as favourable to the origin of the disease either *de novo* or as the result of evolution from some existing organism. As regards the first contention, it should be noted that with the exception of a few cases at Port Said in the person of refugees from Damietta, the route across Egypt from Asia to Europe remained free from disease until quite recently. And not only so, but rigorous quarantine has existed against India both at Suez and at Red Sea ports, and if, notwithstanding this, the disease made its way some distance inland before it was detected, the occurrence serves further to show the futility of such a system. As regards the second view, we have already pointed out several conditions in which the Delta of the Nile resembles some of the cholera haunts in India, and as to this Dr. Mackie now describes the Damietta district, where the disease first appeared, as one through which flows a river laden with rotting carcases, having the best soil for the natural development of cholera contagium—namely, one that is "loosely alluvial and fæcal,"—and as being provided with water which is practically stagnant owing to the in wash of the sea. The study of this epidemic as regards its origin

will, we trust, be a thoroughly efficient one, and for this purpose it is absolutely essential that it should be carried out by those who are entirely free from Egyptian control and influence. As to the *cordons sanitaires* Dr. Mackie gives further information, which, amongst other things, goes to show some of the ways in which they tend to spread infection. Thus, a first case of cholera occurs in a house; the inmates, fearing that they will be shut in by a cordon, immediately take to flight, settling in localities as yet uninfected. Then the soldiers themselves contract the disease, and several cordons have had to be broken up because they became centres of infection instead of safeguards to the country. On one day we read that "one officer and eleven non-commissioned officers" of the Mansurah cordon were taken ill. And, again, "one officer and nine men, Samanoud cordon, taken ill to date, and two men dead; Shebin-el-Kum cordon, four taken ill and two dead three days ago." The total effect of these cordons, in so far as staying the spread of infection is concerned, appears to have been that the progress of the disease has in some cases been somewhat slower than it otherwise would have been, but that this result has been attained at a cost which far outweighs so trivial a benefit. As to this Dr. Mackie writes on the 15th of last month: "The tendency of the disease to spread notwithstanding *cordons sanitaires* is very marked." These cordons "are on a severe trial, and the result will prove whether they have been of any real use. If they prove a failure it is to be hoped they have had their last trial here or elsewhere, as they are the cause of great panic and much hardship." We have certainly no cause to regret that in England we have finally abandoned a system which, since these words were written, has so signally shown itself to have resulted in little else than failure and cruel suffering.

SCARES AT HOME AND ABROAD.

Though it is most desirable that the utmost vigilance should be exerted for the immediate removal of all conditions favourable to the spread of cholera and allied diarrhœal diseases, and for the provision of means to stay the spread of any imported infection, yet it is to be hoped that people will avoid indulging in mere scares because we happen this year, in common with all other years, to have a few deaths from that form of diarrhœa which has been unfortunately misnamed English cholera, but which is not cholera as that term is generally understood. Such cases as have occurred at Shoeburyness, at Llanfyllin in Montgomeryshire, and in the London Docks, ought never to have been noised abroad as being cases of cholera, for such action only tends to create alarm and apprehension without doing any good. Then follow questions in Parliament and paragraphs as to the appearance of cholera in our midst, which tend to spread the false news broadcast. The result of the recent answer given by the President of the Local Government Board in the House of Commons has, however, been singularly unfortunate, for the Italian papers immediately perverted all the facts, and the *Diritto* goes so far as to level reproaches against us and to clamour for quarantine measures against vessels arriving from English ports. We do not for a moment assume that this scare is a genuine one. The medical profession in Italy know better. Political considerations lately led to much acrimony against us in connexion with Egyptian affairs, and the occurrence of three cases of fatal diarrhœa, or of so-called sporadic or English cholera, amongst over twenty millions of people, has unfortunately sufficed for a moment to revive the ill-feeling. By this time, however, our Italian friends have probably had time for reflection, and we trust that no further cholera scares will tend to hinder the friendly relations which we are so desirous of maintaining with them.

PREPARATIONS AT BRISTOL.

There has been much discussion at Bristol as to the expediency of using one of the borough fever hospitals for the reception of any imported cases of cholera, that hospital being situated in the city, at a distance of some seven miles from the spot where vessels will be inspected, and owing to the tide it could only be approached by water for less than three out of every twelve hours. At first sight these seemed serious objections, but the apparent drawbacks to the proposed arrangements were fully explained to the Sanitary Committee by Mr. Davies, the medical officer of health, and his advice was then followed in every detail. In the first place, the danger to Bristol is not in the main by water; cholera has hitherto reached the city from London or South Wales, and has appeared in the heart of the city. In the next place, if cholera occurred on board a ship arriving from Egyptian ports, the disease would probably have terminated fatally or by recovery before a vessel could reach Bristol, and though some difficulty might arise in the case of further spread on board a vessel infected early in its voyage, yet such difficulty would be as nothing compared with the burden of removing all city cases many miles down the river. Mr. Davies succeeded also in allaying many apprehensions by giving some details as to the previous treatment of cases of cholera in the city. When that disease was widely prevalent in 1849, it never spread from the hospitals, and though some thirty deaths occurred again in 1866, the disease never spread to a second house after the first patient was dealt with. Hence, Mr. Davies feels confidence in again placing his main trust in the complete and immediate disinfection of excreta, vomit, and other infected things, and, should a case of cholera be imported, he proposes to supplement isolation by the complete destruction of all such matters.

THE PORT OF LONDON.

Dr. Collingridge has issued a special report specifying all the arrangements which have been made to meet any importation of cholera into the Thames. The Thames Conservancy have sanctioned the mooring of vessels at two different points in the river—one being near to the hospital-ship *Rhin*, which has been thoroughly cleansed and prepared for the reception of patients. Provision has been made for the temporary detention of suspicious cases, for the disinfection of infected things, and for the due burial of the dead; and the chief medical officer will keep himself in telegraphic communication with Dr. Whitcombe, of Gravesend, and with the Customs officials. The report includes a reprint of the recent Order and Memorandum as to cholera regulations and prevention.

THE COLLEGE OF PHYSICIANS, IRELAND.

The College of Physicians in Ireland have issued a memorandum on the threatened approach of cholera, in which, after referring to the experience of past epidemics that the disease is much more likely to be introduced from without by infected vessels entering the Port of Dublin, they observe with satisfaction, they state, that arrangements are being made for the inspection of all vessels arriving in the Liffey, and at Kingstown and Howth, if known to come from a port infected by cholera. The College are of opinion that the port hospital ship, except as a temporary measure, is an inadequate and unsuitable provision against a possible invasion of cholera through the port. They suggest that an isolated intercepting hospital containing not less than twenty beds should be established within a convenient distance of the river, to which patients could be instantly removed. Should the disease become epidemic in Dublin, they recommend that the general hospitals should aid and assist by erecting detached wards on the grounds belonging to those institutions for the treatment of cases. Further, that all tenement houses should be carefully inspected by the sanitary authorities, who should enforce proper sanitary appliances, the removal of the healthy members of infected families to suitable refuges, and the careful inspection of dairies, as experience has shown that milk is a fruitful carrier of contagion. In conclusion, the College recommend that infected bedding and all articles of clothing worn by the sick should be destroyed by fire.

PREVENTIVE MEASURES AGAINST CHOLERA IN GERMANY.

In an official notification on the above subject the German Government has enjoined the formation of commissions to act in conjunction with the Imperial Sanitary Department. These organisations are to take into consideration such measures as may be necessary to prevent the introduction of the malady within the limits of the Empire. The leading body in this matter, the Cholera Commission, held its first meeting on July 3rd at the Ministry for Internal Affairs, under the presidency of Herr von Bötticher, the Minister of

State, and with the co-operation of Herr von Gossler, the Minister in special charge of medical questions. Resolutions were agreed to on various points, including a provision for the periodical insertion in the Government official journal of the latest news as to the spread of the cholera. The principle was also recognised that persons suspected of being affected with the disease should not be allowed to leave Egypt. It was further resolved that a properly organised system of medical control over all ships arriving from suspected quarters should be arranged without delay.

A telegram received from Beyrout on the 30th ult., denies the truth of a report, which it is said has been circulated in Europe, that cholera had broken out at Beyrout. The town is stated to be perfectly free from the disease, and the general health in Syria exceptionally good at the present time. The quarantine and local authorities are doing all in their power to prevent the introduction of cholera.

The *Gazette* of Tuesday last contains the following telegram from Her Majesty's Consul-General at Constantinople:—"July 27th.—Quarantine increased on arrivals from Egypt and Red Sea to fifteen days clean bill of health, twenty with foul. All vessels having done quarantine elsewhere will be subjected to further observation of twenty-four hours on arriving at Dardanelles." A notification also appears that at ports of Austria-Hungary all vessels from Egypt or the East Indies will be subjected to ten days quarantine of observation, whether they have a qualified doctor on board or not.

The scientific mission to Egypt to investigate the cholera epidemic for which a grant of 50,000 fr. has just been obtained by M. Pasteur from the French Chambers, consists of MM. Roux, Thuillier, Straus, and Nocard. M. Pasteur hopes that by scrupulously attending to the hygienic precautions he has written down for them the danger of infection to which they will be exposed may be minimised.

A correspondent of the *Daily News*, in a communication dated Marseilles, Tuesday night, states:—"To-day the *Peluse*, of the Messageries Maritimes Company, arrived here with ninety-five passengers. The *Peluse* is the first steamer we have had which is considered infected. During the voyage from Alexandria to Naples two of the passengers, a man and a woman from Cairo, died from cholera. The bodies were thrown into the sea and also all their clothes. The passengers of the *Peluse* will be subjected to extraordinary precautions. They will be shut up and separated from the other travellers, their food being served through a window."

The subject of cholera was discussed at the Paris Academy of Medicine on Wednesday. M. Guérin expressed the opinion that the disease was not contagious, save under exceptional conditions of aptitude and receptivity. This view was opposed by M. Fauvel.

THE MEDICAL ACT AMENDMENT BILL.

ON Monday afternoon Mr. Mundella received a deputation of medical graduates of the Scottish Universities practising in London, who desired to lay before the right hon. gentleman their views as to the composition of the Divisional Board for Scotland which is proposed to be created under the Medical Act Amendment Bill. The deputation consisted of Sir Andrew Clark, Dr. Dyce Duckworth, Dr. Potter, Dr. Wight, Mr. A. T. Bateman, Dr. Glover, Dr. Barnett, Dr. T. Spencer Cobbold, Mr. Davy, Dr. Johnson, and Dr. Stevenson, and was accompanied by Sir Lyon Playfair, M.P. for Edinburgh and St. Andrews Universities, and Mr. Jas. A. Campbell, M.P. for Glasgow and Aberdeen Universities.

Sir LYON PLAYFAIR, in introducing the deputation, said that they desired to express their feeling of the importance of having a large representation of the universities on the Divisional Board for Scotland. The object of the Bill was to improve the education of medical men, and their status when they had received degrees could, the deputation believed, be attained only if the teaching universities which did the main part of the training of medical men in Scotland had preponderating influence upon the Divisional Board.

Dr. DYCE DUCKWORTH said, as graduates they felt it hard that universities should be, as it were, placed in any kind of competition with the medical corporations. That such must be the case followed from the peculiar constitution of the Scottish universities. As great teaching bodies, they distinctly deserved the highest recognition of their position in any legislative measure. As bodies which undertook the responsibility of training and frequently examining their alumni, they demanded higher consideration than the corporations of Scotland which undertook no teaching and examined their candidates in less searching fashion. There being widespread want of confidence in some of these licensing bodies, it appeared to be highly important that the new Medical Board should consist of members and representatives who were above all reproach, and that the largest number of these should be provided from the teaching universities.

Sir ANDREW CLARK said that in Clause 27 of the Bill there was originally introduced a column for higher titles, and if he was correctly informed, it was proposed to remove the column, or it had been already removed. Upon this point he felt most acutely. He thought it was one of the cardinal points of the Bill. Although he was quite sure that the uniform minimum examination would be sufficient for all the ends of ordinary practice, it would be inadequate for all the demands made on medical men for the higher offices in society and in teaching, and especially on medical officers of health.

Dr. COBBOLD concurred with Sir Andrew Clark as to the importance of registering the higher title. He had the painful experience of often being called on to decide privately for officers of health as to the question of diseased meat; and he knew a case in which a gentleman occupying an important position had condemned the whole carcase of a sound and healthy animal on account of mistaking the cut ends of nerves for parasites.

Mr. MUNDELLA said the deputation had done him a very good service, because really they had come to support the Bill which was now before Parliament. This was something like the twelfth or thirteenth deputation he had received already, apart from those that he had had the honour of receiving jointly with Lord Carlingford. Of all these deputations only one had expressed real opposition to the Bill, and that was the least important and the least representative of them. He had seen a communication from Professor Struthers to the Lord-Advocate, in which he said they were willing to see this Bill passed into law on the ground of its being a kind of settlement of a long and weary agitation which had for a quarter of a century tormented his life and wasted his time. That which gentlemen interested in the profession had experienced in this way the Government had experienced in a greater degree. It was quite time that this vexed question were settled. The public, as well as Parliament, were greatly interested in such a settlement. It was most important that every man who entered the portal of the medical profession should have the three-fold qualification which the Royal Commission reported to be necessary. He agreed entirely with what had been said by Dr. Duckworth and Sir Andrew Clark as to the importance of the preponderance of the university representation upon the divisional body in Scotland, and the Government would insist that the universities should have the preponderance. They were entitled to it. The Royal Commission had advanced sufficient reasons to satisfy the Government of this, and they intended to stand by the Royal Commission in that view. There might be some difference as to the precise proportion of that preponderance, and they might have to come to some arrangement in order to enable them to pass the Bill, driven as they were into a corner by time and the exigencies of their position. He hoped, and, indeed, was anxious, to pass this Bill; and he meant to pass it this session, if it were within the range of human possibility; yet he would rather not pass it than sacrifice its important provisions. He still hoped and believed that in the present month he would get this Bill through the House of Commons. The Government would carefully consider what Sir Andrew Clark had said as to the registration of higher titles.

Sir ANDREW CLARK stated that the London Corporation of Physicians, acting in the most patriotic manner, had relinquished its right to license, but on the clear understanding that there was to be registration of higher titles.

Mr. MUNDELLA was very glad to hear that, and to recognise the unselfish course which had been taken by the

College; and he wished all the corporations would follow such an excellent example. It was much to be regretted that, on a measure which had for its main object the interests of the public, and, next, the higher education and higher status of the profession, the whole battle had ranged round this miserable question of representation of corporations. It was deplorable that men engaged in such a noble work should come there for no other purpose than to preserve beggarly vested interests, and to see how they could retain privileges and rights that were quite unworthy to be compared with the great object which the Government had in view.

The thanks of the deputation were conveyed to Mr. Mundella by Sir Lyon Playfair, and the interview then terminated.

BANQUET TO THE DIRECTOR-GENERAL OF THE ARMY MEDICAL DEPARTMENT.

SURGEON-GENERAL SINCLAIR and the Officers of the Army Medical Department took advantage of Dr. Crawford's visit to Dublin, on the occasion of his receiving the honorary Fellowship of the Royal College of Surgeons, to entertain him at dinner at the Shelborne Hotel on Tuesday evening, the 24th ult.

To meet the Director-General the following gentlemen were invited:—Deputy Surgeon-General Sir James Hanbury, K.C.B.; Dr. Banks, Regius Professor of Physic; Dr. Moore, President of the King and Queen's College of Physicians, Dr. Wheeler, President of the Royal College of Surgeons, Dr. Jacob, President of the Irish Medical Association; Mr. Butcher, F.R.C.S.; Rev. Sam. Haughton, M.D., S.F.T.C.D.

The following civil members of the profession were also invited by various officers:—Drs. Chaplin, Croly, Denham, Dill, Fraser, Gordon, Hamilton, Hayes, Kidd, McNamara, Smyly, Stoker, Swanzy, and Ward.

The hosts were:—Surgeon-General Sinclair, P.M.O. in Ireland; Surgeon-Gen. Gilborne; Surgeon-Gen. Trousdell; Deputy Surgeon-General Fraser, P.M.O., the Curragh; Deputy Surgeon-Gen. Hungerford, P.M.O., Cork; Brigade-Surgeon Roe, C.B., Acting P.M.O. Dublin District; Brigade-Surgeon Lewer. Surgeons-Major Murray, Calahan, Walsh, Killery, Wikeley, Markey, Gore, Fox, Alcock, Dooley, O'Farrell, Hinds, Jenings, Buchanan, Rooney, Harman, Richards, M'Ewen, Fraser, Knox, Stannard, and Ward; Staff Surgeon Carte; Surgeons Ring, Greene, Gormley, Le-Grand, Fenn, Carey, Rainford, Emerson, Peyton, Keays, Clinch, Quarry, Tyrrell, Hickman, Semple, Bond, and Stewart; Captain Gorman, Army Hospital Corps.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns, 5773 births and 3325 deaths were registered during the week ending the 28th ult. The annual death-rate in these towns, which had been equal to 22·2 and 21·3 per 1000 in the two preceding weeks, further declined last week to 20·1. During the first four weeks of the current quarter the death-rate in these towns averaged 20·7 per 1000, against 23·2 and 19·1 in the corresponding periods of 1881 and 1882. The lowest rates in these towns last week were 10·6 in Birkenhead, 13·6 in Huddersfield, 13·9 in Blackburn, and 14·6 in Plymouth. The rates ranged upwards in the other towns to 23·7 in Newcastle-upon-Tyne, 25·0 in Liverpool, and 25·5 in Manchester. The deaths referred to the principal zymotic diseases in the twenty-eight towns, which had been 796 and 813 in the two previous weeks, declined to 747 last week; they included 413 from diarrhœa, 114 from measles, 90 from scarlet fever, 58 from whooping-cough, 40 from "fever" (principally enteric), 20 from diphtheria, and 12 from small-pox. No death from any of these zymotic diseases was recorded last week either in Wolverhampton or in Halifax, whereas they caused the highest death-rates in Sheffield, Newcastle-upon-Tyne, and Liverpool. The deaths attributed to diarrhœa showed a decline of 78 from the number in the previous week; the highest death-rates from this disease were recorded last week in Preston, Sheffield, Leicester, and Bolton. The deaths referred to simple cholera and choleraic diarrhœa in the twenty-eight towns were 12. Measles was proportionally most fatal last week in Salford and Newcastle-upon-Tyne; and scarlet fever in Leeds, Birmingham, and Sheffield. The 20 deaths from diphtheria included 13 in London and 2 in Birmingham. Small-pox caused 6 deaths in London, 2 in Birmingham, 2 in Liverpool, and 2 in Newcastle-upon-Tyne. The number of small-pox patients in the metropolitan asylum hospitals, which had been 60 and 53 on the two preceding Saturdays, were 55 at the end of last week; 7 new cases were admitted to these hospitals during the week, against 2 and 4 in the two preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 195 and 179 in the two previous weeks, further declined to 161 last week, and were 27 below the corrected average. The causes of 62, or only 1·9 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Brighton, Portsmouth, Birmingham, Leicester, Salford, Bradford, and in five other smaller towns. The proportions of uncertified deaths were largest in Oldham, Halifax, and Newcastle-upon-Tyne.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been equal to 19·5 and 20·3 per 1000 in the two preceding weeks, declined to 18·5 in the week ending the 28th ult., and was 1·6 below the mean rate during the week in the twenty-eight English towns. The rates in the Scotch towns ranged from 8·5 and 10·0 in Perth and Aberdeen, to 21·6 in Glasgow, and 23·3 in Greenock. The deaths in the eight towns included 76 which were referred to the principal zymotic diseases, and showed a decline of 27 from the number in the previous week; 24 resulted from diarrhœa, 18 from whooping-cough, 16 from measles, 9 from diphtheria, 6 from scarlet fever, 3 from "fever," and not one from small-pox. The 76 deaths were equal to an annual rate of 3·2 per 1000. The highest death-rates from these diseases occurred in Greenock and Glasgow. The 24 deaths attributed to diarrhœa were within 3 of the number in the previous week, but were 40 below the number in the corresponding week of last year; 16 occurred in Glasgow, and 4 in Greenock. The 18 deaths from whooping-cough showed a considerable decline from recent weekly numbers. The 16 fatal cases of measles also showed a decline. Six of the 9 deaths from diphtheria, 5 of the 6 from scarlet fever, and 2 of the 3 from fever were returned in Glasgow. The deaths referred to acute diseases of the respiratory organs in the eight towns numbered 65 last week, and were 17 below the number returned in the corresponding week of last year. The causes of 72, or more than 16 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been equal to 20·6 and 22·7 per 1000 in the two previous weeks, declined again to 21·8 in the week ending the 28th ult. The mean death-rate in the city during the first four weeks of the current quarter was 22·0 per 1000, against 21·9 in London and 16·5 in Edinburgh. The 146 deaths in Dublin last week showed a decline of 6 from the number in the previous week. They included 5 from diarrhœa, 2 from "fever," 1 from scarlet fever, 1 from whooping-cough, and not one either from small-pox, measles, or diphtheria. Thus only 9 deaths resulted from these principal zymotic diseases, against 19, 11, and 15 in the three previous weeks; they were equal to an annual rate of 1·3 per 1000, the rates from the same diseases being equal to 5·4 in London and 1·3 in Edinburgh. The deaths referred to "fever" which had been 5 and 6 in the two previous weeks declined to 2 last week. The 5 deaths from diarrhœa, however, exceeded the numbers in recent weeks. The fatal case of scarlet fever was the first recorded since the end of June. The deaths of infants showed a marked decline from the numbers returned in recent weeks, and those of elderly persons were also less numerous. The causes of 16, or nearly 11 per cent., of the deaths registered during the week were not certified.

THE Woolwich Board of Guardians have increased the fee for medical certificates in cases of lunacy from 10s. to £1.

THE SERVICES.

Brigade Surgeon J. J. Thompson has arrived at Aldershot, and taken over the duties of sanitary officer of the division from Brigade Surgeon Carter.

By order of the War Office authorities, Quartermaster Lackey and forty-four non-commissioned officers of the Army Hospital Corps proceeded from Aldershot to Tilbury on Wednesday and embarked on board the Peninsular and Oriental Company's steamer *Carthage* for passage to Suez.

YEOMANRY CAVALRY, MONTGOMERYSHIRE.—Surgeon Richard Marsden Pilkington Low, M.D., resigns his commission.

ARTILLERY VOLUNTEERS.—4th West Riding of Yorkshire (Sheffield): Acting Surgeon William Jackson Cleaver, M.B., to be Surgeon.

ADMIRALTY.—Surgeon M. Murray Ritchie Mackenzie has been placed on the retired list of his rank from the 6th inst. The following appointments have been made:—Fleet Surgeon Simon A. Willis, to the *Castor*, vice William J. Baird; Fleet Surgeon Godfrey Goodman, to Sheerness Dockyard, vice S. A. Willis; Staff Surgeon William S. Fletcher, to the *Euphrates*, vice Goodman; Surgeon Everard H. Saunders, to Devonport Yard, vice William S. Fletcher; Surgeon James W. H. Hawton, to the *Minotaur*, vice E. H. Saunders; Surgeon Charles W. Hamilton, to Plymouth Hospital, vice Hawton; and Surgeon Robert W. Anderson, to the *Stork*, vice Joseph Anderson, deceased.

Correspondence.

"Audi alteram partem."

STRANGULATED OMENTAL HERNIA.

To the Editor of THE LANCET.

SIR,—An interesting question is raised in Mr. Rushton Parker's tract on "Abdominal Hernia," reviewed in THE LANCET of July 21st I mean the reality of the occurrence of symptoms of strangulation in hernie containing omentum only, and the cause of such symptoms. Mr. Parker, as you observe, seems to doubt the fact altogether, though he does not expressly deny it. In order to establish its reality, I turned to the "Hernia-book" of St. George's Hospital. A record of operawas surgical registrar, and I looked through the first 150 tions for "strangulated" hernia commenced many years ago, when I cases. Out of these (which are consecutive and unselected cases) I find there were five in which the sac contained omentum only. In one of these, however (a case of umbilical hernia), it may, I think, be fairly questioned whether the hernia was strangulated or only "incarcerated" or "obstructed." The other four were all cases of femoral hernia. In three the tumour was of small size; in one the symptoms are said to have been slight; the other two seem to have had the usual symptoms. All these recovered after the operation. In the fourth case there was a large piece of omentum in the sac, much congested; the symptoms were severe; peritonitis set in before the operation, and the patient died.

All these cases occurred many years ago, in the practice of older and better surgeons than myself. I have not searched over later records, but these, I think, justify the statement in my book, that "the strangulation of omentum only produces symptoms identical in kind with those of strangulated bowel, though possibly not so severe."

How, then, is the fact to be accounted for in the face of the undoubted fact that a ligature tied tightly round the omentum contained in a hernial tumour produces no such symptoms? Mr. Parker suggests three explanations. Some of these cases, he says, may have been tumours in which there has been bowel as well as omentum; but the bowel has been reduced before the operation. I suppose Mr. Parker means that this reduction has taken place immediately before operation in the last efforts which are usually made under anæsthesia; otherwise the symptoms would have subsided and the operation would not be performed. But surely an experienced surgeon would be conscious of the sensation of the reduction of the gut; and, besides, the place which the empty bowel had occupied would be seen during the operation. I cannot think that this explanation is probable, at least as applied to the practice of surgeons who have had large experience of strangulated hernia. In other cases, Mr. Parker thinks, the symptoms were due to the dragging of the displaced omentum on the transverse colon. The same explanation has suggested itself to my mind, and it may very possibly apply to cases of umbilical hernia, as to the one above mentioned; but it does not apply to those in which the neck of the sac is tightly constricted, and the hernia is far from voluminous, possibly very small. Mr. Parker's third explanation is, that inflamed omental hernia with peritonitis may produce symptoms which some would describe as "strangulated omental hernia." This, I think, is not only possible, but very probable; but it cannot in any way apply to three out of the four cases of femoral hernia above mentioned, seeing that the hernia was not inflamed, and that there was no sign of peritonitis.

I must therefore repeat what I said in the book quoted by Mr. Parker, that "I find it difficult to account for this fact on purely mechanical principles." My own impression is that the function of the intestines is suspended by some reflex action originating in the nerves of the strangulated omentum; and in an interesting conversation which I lately had with Mr. Parker on the subject, he told me that he believes Mr. Lister to have expressed a similar view in the Proceedings of the Royal Society for 1857, but I have not had an opportunity of looking for the passage.

The subject is one which has long interested me, and is, I think, worthy of more attention than it has received from the authors on hernia.

I am, Sir, yours obediently,

Great Cumberland-place, July 23rd, 1883. T. HOLMES.

INTRODUCTION OF CHOLERA TO LONDON.

To the Editor of THE LANCET.

SIR,—The very excellent letter from Mr. Cheshire in your impression of last week on the introduction of cholera to London confirms all I have said and written for months past to the Metropolitan Board of Works respecting the susceptibility of London to the disease, and the means of averting it by purifying the Thames. By desire of the Metropolitan Board, I went to Crossness some months ago with authority to examine everything there to enable me to show how the river could be purified. The result of my examination left no doubt in my mind that London was reposing on a bed of horizontal cesspools. What then but pestilence must naturally follow, in all probability, such a state of things? Yet the remedy was certain. I showed the Board how the whole of the sewage of London could be utilised in a dry and solid form, and not a particle or drop of either solid or effluent be passed into the river. There would be nothing then to poison the stream, and the river would of course be pure. Moreover, I pointed out to the Board how London could be supplied with many million gallons of perfectly pure water a day, in addition to its ordinary supply. That such a state of things would be a boon to London and the country at large, no one, I think, can doubt. The Board of Works too, I believe, were impressed with the importance of the undertaking, and very naturally referred the subject to their engineer, Sir Joseph Bazalgette. Of that gentleman I would not, if truth can help it, say a word disparagingly. His progess from Portsmouth Dockyard to his present position has been one of honour and advance, and helps to prove the belief that when anything of good is contained in a human vessel it will sooner or later find its way out. It has been so with Sir Joseph, and all honour to him I say. He was the designer of a great and grand scheme for draining London, although withal it was somewhat expensive, for the line from Deptford to Crossness cost the substantial amount of £40,000 a mile. Yet with all that cost the scheme was imperfect, for Sir Joseph Bazalgette was unable to dispose of the sewage without poisoning the Thames with it. Therefore, though he did a good act by draining London as it then was, he made the Thames a pestilential ditch, and London obnoxious to pestilence and disease. My remedy would cure it, and he has not in all our correspondence been able to show that it would not. I have reason, however, to believe that in secret he opposed the adoption of my process, the scientific soundness of which he cannot disprove, and, if report speaks truly, he would purify London and the Thames

by conveying the sewage from London to the German Ocean, at a cost of more than £6,000,000. But the doing so would not purify London, and would be a most outrageous act to perform. Yet my process would do all that I say to purify the Thames, and London too; would give the town a daily supply of 20,000,000 gallons of water, in addition to the stuff it now has, free from any contingent, except possibly an atom of ammonia. Mr. Cheshire, however, is in error when he says that the drains of London cannot be kept clean. If he knew what passes from some of the best houses in London to Crossness, he would see to the contrary. There is nothing more easy than to keep sewer-gas from houses if a right system of general sanitation be adopted.

I am, sir, your obedient servant,

W. HEMPSON DENHAM.

Southsea, Portsmouth, July 30th, 1883.

A CASE OF REPUTED CHOLERA.

To the Editor of THE LANCET.

SIR,—You will have seen in the papers a reference to a fatal case of cholera at Wetherby-road (a beautiful street at Earl's Court). In fact, the poor man came from a mews (Wornington) at the N.E. corner of the parish. The history of the case, so far as is known to me, is subjoined. I presume the case was one of English cholera occurring in an intemperate, ill-nourished person, whose life may have been taken out of him by the treatment he received in removals. I had the straw he slept on burned, his clothes also, and disinfected the stable.

John Stone, aged twenty, a stableman, homeless, but allowed to sleep in a stable at Wornington-mews, Notting-hill, was taken ill on July 17th. He is stated to have been out of health previously for some time, and to have been of intemperate habits. Not making his appearance in the early morning to take down some shop shutters according to custom, his employer went to the stable to inquire the cause of his absence, and found him very ill. He was taken in a cart to Marylebone Infirmary (Notting-hill), but was refused admittance. He was then taken to the surgery of a private "provident dispensary" for treatment, on his way back to the stable. Application was made to the relieving officer, who gave an "urgent" order on the district Poor-law medical officer, who, finding him suffering from "cholera," ordered him to the parish infirmary, at Marloes-road, Kensington, whence he was taken in a cart, arriving at 10 P.M. On admittance he was collapsed; skin pinched, cold, and blue; eyes sunken; pulse very feeble; temperature 95°. Brandy was administered internally and hypodermically, hot-water bottles being applied to the extremities. He rallied a little at 11 o'clock, and stated that he was taken ill with diarrhœa and cramps in the stomach early in the morning. The bowels acted twice in the infirmary, the stools being "rice-coloured." He died at 12.25 A.M. on July 18th. No post-mortem. The medical officer of the infirmary, who has seen cholera in Egypt and elsewhere, had "no doubt about the disease."—Yours faithfully,

J. ORME DUDFIELD.

Town-hall, Kensington, July 28th, 1883.

TREATMENT OF CHOLERA.

To the Editor of THE LANCET.

SIR,—I see a good many suggestions as to the treatment of cholera in your journal, but none of them allude to what must purely prove the most effective—viz., the introduction of drugs hypodermically. I am sure the great failure in all treatment arises from the fact that all absorption is arrested, and the medicine put into the stomach is returned to the basin. The experience deprived from the observation of several epidemics of cholera would induce me to rely on morphia and Fowler's solution of arsenic, diluted with twice its weight of water, and given in five-drop doses every fifteen minutes until some effect is produced. At the same time a blister may be made over the epigastrium with nitrate of silver; this I have seen do much good. Of course I would not omit the use of hot flannels and the free drinking of iced water. Having seen a great number of cases of cholera while in charge of troops between Marseilles and the Crimea, and afterwards in hospital and private practice in China, I can bear painful testimony to the small effect produced by medicines given by mouth or rectum. Arsenic in large doses I have seen do some good, as also chlorodyne, but very little. I am, Sir, yours truly,

RICHARD G. JACK.

Atherstone-terrace, S.W., July 27th, 1883.

To the Editor of THE LANCET.

SIR,—In the last number of THE LANCET Dr. Carrick Murray writes that, so far as he knows, hydrate of chloral has not been internally given for cholera, and that its qualities should be sufficiently potent to destroy the poison of cholera. Such a hope cannot be entertained, for it is well known in France that Gubler has tried chloral by way of hypodermic injections (forty centigrammes in twenty-four hours), and that Reichert and Blumenthal of Riga administered it internally. It appears that in several cases it acted well against the cramps, but failed utterly to destroy the poison. The experiment should be repeated; but, in fact, chloral has already been employed.

I am, Sir, yours truly,

Paris, July 30th, 1883. DAVID DININ.

THE INDIAN MEDICAL SERVICE.

To the Editor of THE LANCET.

SIR,—For the sake of the future of any candidate who may be intending to offer himself for the next examination for the Indian Medical Service in August, I beg that you will afford me space for comment on Mr. Cross's reply to Mr. Leamy's statement concerning the present condition of the service. Mr. Cross admits the exceptionally large number of junior surgeons in India drawing "unemployed pay." He explains it in three ways, the first two of which are untrue, as there is not an unusually small number of officers at the present time on furlough, nor were the number of vacancies advertised for in the time of the Affghan war larger than had been previously. But even admitting Mr. Cross's reply to be true, it is to be observed that he admits the large surplus at present existing. How, then, does it happen that the India Office has issued an advertisement for August next of an examination to be held for five appointments? Sir, there is not an appointment vacant in any of the three Presidencies. I have myself been informed by the secretary to the Principal Medical Officer with Her Majesty's forces in India that there are forty men more in Bengal alone (now forty-six) than his office knows what to do with. The state of things in Bombay and Madras, according to letters that have appeared in the Indian press, is worse. How, then, can there be five appointments to be competed for? Mr. Cross also states that the published conditions under which officers accept employment are accurately fulfilled. Now these conditions are that we receive unemployed pay of 286 rupees 10 annas per month, until we have passed the language examination. This is usually passed in two or three months after landing. After passing, the memorandum of the India Office leads the surgeon to suppose that he will receive pay of 450 rupees a month.

Now, Sir, up to the present time, by referring to the Bengal Army List, it will be seen that there is not a single surgeon of five years' service who is in receipt of this pay, while there are even many surgeons of over five years' service not yet in receipt of the pay promised them. Mr. Cross likewise states that an unemployed lieutenant receives only 256 rupees a month. This is a most ingenious quibble. There is not a single lieutenant in the Indian Army unemployed, nor has there ever been one. Doubtless, if there were one he would receive the above pay, but as a matter of fact the lowest pay he ever receives is 325 rupees a month.

Let me, in conclusion, earnestly warn, through your columns, all candidates who may be on the verge of competing for these "five appointments" to withdraw at the eleventh hour. They will otherwise bitterly curse the day when they entered the portal of the once honourable and honoured Indian Medical Service. I warn them that the statement that there are five appointments to be competed for is merely to be read as a Parliamentary statement, and that they will never receive pay at the rate of 450 rupees a month; for five years at least must elapse before there are any vacancies for "pucka" appointments. There are many of us over five years' service without an appointment, and

therefore we shall never have been in receipt of this pay, which we were led to suppose we should receive within a few months of our landing in India.

I am, Sir, yours obediently,

Bengal, June, 1883. DUPED.

"DIGITAL DILATATION OF CONTRACTED PYLORUS."

To the Editor of THE LANCET.

SIR,—Having read with pleasure in THE LANCET of June 16th of the two patients operated upon by Prof. Loreta by forcible finger dilatation of the pylorus, I thought it might be agreeable to you to learn that they are continuing to do well. The vomiting they had been troubled with for years has not recurred; and from having been in a starving condition they have returned to full health and strength.

A third case was afterwards operated on, Prof. Loreta's diagnosis having been "simple stenosis of pylorus." The patient died in thirty-six hours, from causes entirely independent of the operation. The autopsy showed the incision in the stomach perfectly closed, gas and liquid light, and pylorus well dilated.

The week before last, Prof. Loreta operated on a woman, the diagnosis being "stenosis of cardiac orifice," with entire success, and the patient continues improving. As the operator could not reach to dilate with his fingers, he was obliged to resort to an instrument. The fifth and last operation took place on July 15th. The diagnosis, "stenosis of pylorus," was also in this case justified by the state of things found on operating. The success was perfect, as in the other cases. This last patient, too, continues improving, and everything justifies the expectation of a favourable result. The digital dilatation of the two orifices of the stomach, but especially of the pylorus, first conceived and executed by our illustrious surgeon, and named accordingly "Loreta's operation," is destined to enjoy a brilliant future in the surgical world. Since its adoption, attention has been directed to the existence, little before suspected, of the frequency of pyloric narrowing; and the surprising results obtained fully justify the most sanguine expectations.

Prof. Loreta lays special stress on dilating with the fingers rather than with instruments, as he is thus enabled to carry the dilatation to the utmost possible extent short of rupturing the parts, for the fingers can feel how far we can safely go, which no instrument can of course do. The dilatation by the fingers once effected, we may reasonably count on its permanence, judging from the before-mentioned instances, the first of which was operated on in September, 1882. The suture for the wound in the stomach adopted by Professor Loreta is that of Apolito Gély, made with a single needle. This suture is quickly made and perfectly secure.

I send the report made to the Bologna Benedettina Academy by Professor Loreta, in which he minutely describes his manner of operating, and the exact rules of differential diagnosis of simple narrowing of the pylorus. It would be very gratifying if this succinct account of Loreta's operation should find room in the columns of your world-renowned journal.

I am, Sir, your obedient servant,

GUIDO PEDRAZZOLI, M.D.

Clinical Hospital, Bologna, Italy, July 21st, 1883.

SCOTTISH NOTES.

(*From our own Correspondent.*)

MANY friends of Dr. Paterson (Bridge of Allan) will join in expressing sincere sympathy with that gentleman in the trial he has endured recently in the loss of no fewer than three of his sons. All of these young men have died in different parts of the world; the last in South Africa, where he served as captain in the Mounted Volunteers. Another was a medical man.

ABERDEEN ROYAL INFIRMARY.

A special meeting of the managers of this institution has been held to consider whether the position held by Dr. Robertson as superintendent should be again held by a medical man or made open to all applicants. It was generally felt that the position should be held by a medical man, and that such applicants should have a preference, but that the situation should be advertised as open to all. The salary is £250 a year, with free house, &c. In all the other chief hospitals throughout Scotland, certainly in all to which a large medical school is attached, this office is held by medical men; and it would seem a retrograde step to introduce a change in a system which everywhere works so well.

SALICYLATE OF SODA AS A POISON.

Some months ago a case was mentioned in this column in which death was alleged to have occurred after the use of fifteen grains of salicylate of soda, and it was then deemed worthy of further inquiry. It appears now that the widow of the deceased has raised an action against the chemist at Aberdeen who supplied the drug for £750 damages, and the case has been sent for proof. It is alleged that the drug was a poisonous compound other than that ordered. In connexion with the case a discussion took place before the sheriff last week regarding the possession of the powders. The woman bought six of these, of which one was used by the deceased, another given to Dr. Robertson who attended the case, and the remaining four to Dr. Frank Ogston for the purpose of analysis or experiment. Pursuer's agent now complains that Dr. Ogston, without his permission or that of the Procurator Fiscal, had given one of these powders to the defendant, and that this was a plain breach of duty on the part of Dr. Ogston. The sheriff, however, refused a motion to have this powder restored to pursuer. The case excites considerable medical interest, and will be tried during this month.

COMBE AND GILCHRIST LECTURES.

The courses of these lectures, which have been arranged for the ensuing winter and spring, are as follows:—The Combe Lectures on "Physiology and Health" will be delivered, as usual, by Dr. Andrew Wilson, in Burnt Island, Dalkeith, Audrie, Alloa, and Leith. Dr. Wilson will also deliver a special course, arranged for by Mr. James Coates, jun., at Paisley, and another in Perth, on "Health." Galashiels, Hawick, Peebles, Selkirk, and Jedburgh will each be favoured with three lectures on "Electricity and its Modern Applications," by Mr. W. L. Carpenter, under the auspices of the Gilchrist Trust; and the same towns will also be visited by Dr. Wilson, who will lecture on "The Beginnings of Life."

SCOTTISH METEOROLOGICAL SOCIETY.

A very important meeting of this Society was held last week. It was stated that £4400 of the £5000 needed to equip the Ben Nevis Observatory was already subscribed, and that there is now no doubt of the work being carried on under the most favourable circumstances. Mr. John Murray announced, on the part of the Fisheries' Committee, that it was determined to continue river observations as heretofore; that a few naturalists should be asked to make special observations at several of our chief fishing stations and lochs; and that the recommendation in favour of a zoological station should be adopted, and Granton Quarry, on the Forth, be utilised for the purpose. The quarry has an area of about ten acres, and depths varying to sixty feet; this it is proposed to enclose and stock with all kinds of fish and marine invertebrates. A barge fitted specially for work here will be moored in the enclosure, a launch provided for dredging purposes, and a naturalist appointed to the station. A library, instruments, &c., will be amply provided, besides accommodation for other naturalists who may wish to work at the station. From various sources funds have been obtained to carry out this ambitious scheme, and work will be commenced forthwith. Mr. Murray undertakes to supply instruments and books, and seems to have inspired others with his own enthusiasm in the matter. The Society may be most heartily congratulated on such a report of good work done as that mentioned at this meeting.

BELFAST.

(*From our Correspondent.*)

QUEEN'S COLLEGE, BELFAST.

THE President of Queen's College, Belfast, has just written, for private circulation, a paper of great interest, entitled "University Education in Ireland; the Royal University and the Queen's Colleges." In this pamphlet, the appearance of which has aroused considerable attention, Dr.

Porter explains the origin of the Colleges, which were opened in 1849, gives an account of the training afforded by them, and shows how they are adapted to all sects and classes. As showing how successful Queen's College, Belfast, has been, he states that it was opened in 1849, and the average attendance of students during the first decade was 189; during the second decade the average rose to 368; during the third to 400; and in session 1881–2 there were 566 student enrolled. The total number who have been educated in the College during the thirty-three years of its existence is 3811, nine-tenths of whom were natives of Ulster. Sir Lyon Playfair has stated that "the object of a university is not merely to have an honour list, but also to promote efficient study among many, as proved by their attaining degrees on fair and reasonable though adequate conditions." Judged by this standard, as the President remarks, a great educational work has been done at Queen's College; for of its 2850 matriculated students, 1247 graduated in the Queen's University, of whom 735 graduated in Arts, and the rest in Medicine and Engineering. In addition to these, a large number in the Faculty of Medicine obtained their qualifying degrees or diplomas in other universities or licensing bodies. As nearly as can be judged, about 60 per cent. of those who matriculated in the College proceeded to graduation. During the first forty-two years of its existence, the University of London produced 1745 graduates in Arts and 320 in Medicine; an aggregate of 2065. During the first thirty-two years, Queen's College, Belfast, produced 735 graduates in Arts and 512 in Medicine; being a total of 1247, and this through the Queen's University alone. The following statistics, as recorded in Dr. Porter's paper, give some idea of the position which Queen's College, Belfast, holds among the University Colleges of Ireland. He states that when the census of 1881 was taken, Trinity College, Dublin, contained 1338 students. In point of numbers, Queen's College, Belfast, comes next, with 508 students. Then follows Maynooth, with 416 students; Queen's College, Cork, had 327 students, Queen's College, Galway, 208 students. There is a growing feeling in Ulster that if the question of Irish education is again to be re-opened, there is a solution of the difficulty as far as the north of Ireland is concerned, and that is the establishment of a university in Belfast. In referring to the claims of Belfast to be the seat of a university, the President states that Belfast now contains about 220,000 inhabitants. It is the commercial capital of Ireland. It is, besides, as he remarks, the capital of Ulster, which has a population of 1,743,075, being more than one-third of the entire population of Ireland, and nearly one-half of that of Scotland. The present arrangements for conducting university examinations and granting degrees are not satisfactory to the great body of the people. They are much too complicated; and the attempt to combine in the Royal University methods of education essentially distinct, and in some respects almost antagonistic, is not successful. Dr. Porter's paper is a very able one, and its appearance at the present moment, when the Irish education question is again coming to the front, is very opportune.

BELFAST HOSPITAL FOR SKIN DISEASES.

The eighteenth annual meeting of the subscribers and friends of this hospital was held at the institution on Thursday, July 19th. According to the annual report, 942 patients were treated during the year, of which number 33 were admitted into the intern department, 909 being extern patients; 16,511 patients have been treated since the first hospital was opened in 1865. The income, from all sources, during the year was £312 13*s.* 11*d.*, whilst the expenditure was £314 10*s.* 6*d.*, showing a deficiency of £1 16*s.* 7*d.* Dr. H. S. Purdon, the honorary medical officer, reports that persons have applied for treatment from the counties of Armagh, Tyrone, Derry, Donegal, and Louth, and that in no instance has an application been refused attention.

ULSTER MEDICAL SOCIETY.

At the annual meeting of the above Society, held in the Royal Hospital, Dr. Dill, Professor of Midwifery, Queen's College, Belfast, was elected president for the session 1883–4.

HOSPITAL FOR INCURABLES AT LISBURN.

Mr. James Bruce, J.P., of Belfast, is erecting a Hospital for Incurables at Lisburn in memory of his father-in-law, the late Dr. Thompson, who resided in Lisburn, and was for a lengthened period one of the leading practitioners of the North of Ireland.

THE CHOLERA IN EGYPT.

(From our Correspondent.)

SINCE last week cholera has markedly diminished at the places first attacked, but is spreading rapidly, and has got a strong hold of Cairo.

According to official returns, the total mortality from the epidemic in Egypt was 4010 up to July 20th. Since then the total has considerably mounted up during the last few days, chiefly owing to the mortality in Cairo, which, in the twelve hours from 8 P.M. of the 22nd to 8 A.M. of the 23rd, numbered 296. The subjoined table gives the mortality at the various places up to date, and the population of the towns.

Place.	Deaths to 21st July.	Population.
Damietta	1873	34,046
Port Said	8	16,560
Mansourah	989	26,784
Samanoud	278	11,557
Cherbine	78	Unascertained.*
Alexandria	4	208,775
Menzaleh	207	Unascertained.
Falha	42	13,789
Chebin-el-Kom	169	16,191
Zifta	27	11,225
Chabar	98	Unascertained.
Nagoa	20	,,
Guize	100	11,417
Mit Gamr	19	11,140
Mehallah-Kebir	33	27,908
Cairo	608	368,108
Fantah	28	33,725
Simbillanen	1	Unascertained.
Cafr Badaman	5	,,
Salakie	5	,,
Fakous	4	,,
Kafre Zaïab	2	,,
Soufia	15	,,
Beni-Souef	1	10,038
Dajadous	10	Unascertained.
Belcasse	10	,,

* All places denoted as "unascertained" contain less than 10,000 population.

With regard to the origin of the epidemic I have only a few words to say. It appears that Mohamed Khalifa, the fireman who left the British steamer (from Bombay) at Port Said, and who was reported by Dr. Flood as having probably been the source of all the mischief, did really arrive in Damietta on June 18th, that he came back to Port Said and was expelled, and again went to Damietta; so that Dr. Flood maintains that Mohamed Khalifa was in Damietta a few days before cholera broke out in that place. This is, perhaps, not the time to inquire particularly into the origin of the outbreak, but doubtless, in whatever way it was imported (if it really was imported) from its endemic area, it found in Damietta, Mansourah, &c., an excellent nidus, revelling in sanitary defects.

With regard to the symptomatology of the outbreak, such absurd rumours have been flying about that the disease is not cholera, but some unheard of variety of gastric fever, or a wonderful combination of typhoid fever with cholera, that I have made special inquiries at trustworthy sources (for as yet we have, happily, had little experience of it in Alexandria), and have received the following information, concisely put.

The symptoms are in some cases only premonitory diarrhœa, then vomiting, purging with rice-water stools, coldness of the extremities and blueness, shrunk and shrivelled face, with eyes sunk and surrounded by a dark margin; urine albuminous, in severe cases suppressed; belly retracted; cold tongue; the temperature in the axilla in several cases 36° C., and post mortem 39° C.; muscular cramps. Shortest duration of the disease nine to twelve hours. In cases that pass by the algid stage, and in whom reaction supervenes, cholera-typhoid generally comes on, and this, doubtless, accounts for the vague rumours that the disease is not cholera, the appearance &c. of the patient being so different from those dying in the stage of collapse. This report is from a good observer, Dr. Haddad, who was sent to Mansourah by the Relief Committee here. Regarding the spread

of the disease, it seems to extend chiefly in a south-westerly direction. At first it was confined almost solely to towns and villages on the Damietta branch of the Nile, but it has now reached several places between the Damietta and Rosetta branches. This spread is doubtless due to intercourse between the villages, in great measure, by road and railway. It really would seem as if the wind has had something to do with its propagation. The prevailing wind at Damietta is N.E. Now, no doubt, Menzaleh was affected by fugitives from Damietta; and if we suppose the wind to blow in a straight line from the N.E. from Damietta and Menzaleh, we get a quadrilateral within which are practically all the places in which the epidemic has appeared, except Alexandria, Port Said, and Cairo. Now, the two former may be dismissed from consideration, as only a few isolated cases have occurred in each. Cairo remains to be accounted for; it is altogether out of the line of the N.E. breeze from Damietta. To reconcile this an ingenious theory is started. The prevailing Alexandria wind is N.W., Damietta wind N.E. Now, if these forces are equal, their resultant would give when they meet a wind blowing straight southwards, which would involve Cairo, and also Beni-Souef, about twenty or twenty-five miles south of Cairo. The disease has, therefore, on the whole, spread up stream, and with the prevailing winds. The cordons round infected villages have now been withdrawn. They have, doubtless, retarded the disease, but unless they had encircled large districts they could not prevent its march, because inhabitants ran off from the villages as soon as a case declared itself, and before a *cordon sanitaire* could be established. To encircle a large district of country was found to be impracticable, owing to the impossibility of getting enough soldiers to form a large cordon.

With regard to the medical men likely to come to Egypt, I should like to offer a few words. They come here to assist the Egyptian Government; but they ought before starting to have some idea of how they are to be disposed of and what duties will fall to them. Where are they to be sent? Supposing they are despatched to some of the villages, where are they to be lodged? what are they to eat and drink? These may seem small points, mere matters of detail, but they are more serious matters than they appear. People that do not know Egypt and the Egyptians have little idea of what awaits them. Doctors should remember the following difficulties before they come here, and endeavour to have them cleared away before they set out:—

1. The houses of the moudirs and governors of the villages and towns, in which presumably the doctors would be invited to reside, are filthy and unsanitary beyond description.

2. The food they use is very different indeed from what an Englishman is accustomed to. He would arrive here in the hottest season from the pure air and good food to which he has been accustomed, and find himself living in bad air, housed in bad air, fed on a diet and cookery quite new to him; and it would be almost miraculous if some of the doctors did not fall victims to cholera.

3. The doctors come out to assist the Egyptian Government. Their own doctors (and also European medical men) think this an intrusion and a serious innovation, and accordingly will be exceedingly jealous and watchful of the results of this new importation. The Egyptian authorities do not know what sanitation is; and I question very much if they would not resent suggestions of our English doctors as simply new-fangled ideas, which the Egyptian does not see the force of and will not trouble himself to carry out. It is a well-known fact that at the present moment the Sanitary Commission of Cairo are constantly squabbling with the authorities, because the latter, headed by the prefect, simply refuse to carry out their suggestions and recommendations.

Briefly stated, English doctors coming out here would labour under the following disadvantages. The authorities would scarcely know what to do with them; they will find themselves, in stifling hot weather, sent probably to the villages, with bad accommodation, bad food, bad air, strangers to the country, to the people, to their habits and modes of life—in fact I feel sure they will find themselves very much cast adrift. The following suggestions I know to be so good that I hope I shall be pardoned for mentioning them. The doctors ought to see to it that when they are sent up country they are provided with good double tents for coolness, and a kitchen tent, so as to have their food properly cooked and attended to by a good servant.

A very good suggestion for you to make would be that the Egyptian Government should allow the doctors sent out to act under the advice of the Cholera Relief Committee here. The committee is composed of some of the most prominent and energetic citizens, English and foreign, and are doing really good work. They would be in communication with the Cairo Board of Health, and would be able to assist the doctors in many ways by attending to telegrams, supplies of medicine, &c. I am perfectly sure, also, that Dr. Mackie, whose long work and service among the Egyptians have not been deemed worthy of being of benefit to the Government at this crisis, would be exceedingly willing to foward the interests and the labours of doctors coming from England, and would be very happy to give them advice and assistance; while his intimate knowledge of the country and the people, and his long experience, could not fail to be of immense service to strangers.

Addendum.—For some time previous to the outbreak of cholera there was strict quarantine at Suez against all vessels arriving from India, in consequence of the existence of an increased rate of cholera at Bombay, but as the rate diminished to the normal and remained so for fifteen days, it was resolved to grant vessels free pratique. The first vessel, however, that had free pratique arrived at Suez four days after cholera broke out at Damietta. This important fact can be verified by application at the Foreign Office.

I may also add that since this date last week there have been no cases of cholera in Alexandria. The health of the town is excellent. We are having fine north-westerly breezes, and though the air is damp, it is comparatively cool. The extraordinary Sanitary Commission and various departmental commissions are doing excellent work—cleaning the sewers and disinfecting them, cleansing the city, and generally improving, as far as is possible, the sanitation of the town. Various dens of filth have been discovered (the slaughter-house and its surroundings being specially distinguished for its painful effect on eye and nose), and have been thoroughly cleansed. Altogether, should cholera visit us, we are much more prepared to fight it than we should have been a month ago.

Alexandria, July 23rd, 1883.

MEDICAL NOTES IN PARLIAMENT.

IN the House of Commons on the 27th ult., Mr. Stevenson gave notice that on the second reading of the Local Government Board (Scotland) Bill, he would move an amendment adverse to making any change in the inspection of alkali works. The Detention in Hospitals Bill was withdrawn.

On Monday, seven petitions were presented from King and Queen's College of Physicians, Ireland, for alteration of the Medical Bill. A copy was presented of an order of Council, dated 21st July, under the Public Health (Scotland) Act, for putting in force, for six months, the provisions for the prevention of diseases contained in part 3 of the Act.

Medical Baronetcies.

Mr. Gibson gave notice for Monday next, to ask the First Lord of the Admiralty, if he could state exactly how many baronetcies are now held by eminent physicians and surgeons in England and Ireland respectively; how many such creations have taken place in England and Ireland respectively within the last five years; and what is the reason for the contrast in the numbers. Col. King-Harman also put a question on the paper as follows:—To ask the First Lord of the Treasury, if he has any objection to state whether it is true that he has advised Her Majesty graciously to confer the honour of baronetcy upon two distinguished English gentlemen of great medical and surgical skill; and whether he has also advised Her Majesty to reward the services of an Irish gentleman, who has also attained to great and deserved eminence in the surgical profession, with the simple honour of a knighthood.

London Water Supply.

Sir C. Dilke stated to Dr. Cameron that he had called the attention of the water examiner of the metropolis to the resolution passed at the recent conference of medical officers of health upon cholera precautions. The Local Government Board had full confidence in Professor Frankland's analyses, which were made on their behalf, and they had nothing to do with the monthly reports circulated by the water companies.

At present they saw no sufficient reason for obtaining control analyses, but they sometime ago arranged for supplemental examinations by Dr. Angus Smith. In reply to Mr. Mitchell Henry, the right hon. baronet said that attention had been called to Mr. Henry's suggestion, that the water companies should, in view of the fear of cholera, erect standpipes in the streets in order to supply the poor with water direct from the mains.

The Contagious Diseases Acts.

Sir W. Harcourt stated to Captain Price that a member of the metropolitan police force was allowed, at the request of the Plymouth local authorities, to render assistance so far as the voluntary submission of women to examination was concerned.

On Tuesday, Lord Hartington promised Dr. Farquharson to lay upon the table a memorial received from the Association for Promoting the Extension of the Contagious Diseases Acts, and the reply thereto. In reply to Mr. Hopwood, the noble lord said it was true that the ratio of disease in protected districts rose from 35 to 74 per 1000 between the years 1877 and 1880. It was also true, however, that in the same period, in the districts not protected by the Acts there was an increase from 68 to 119 per 1000. It would seem that a serious wave of venereal disease occurred in 1880, as there was a sudden rise in the ratio of 27 per 1000 in protected districts, and of 59 per 1000 in fourteen large stations not under the Acts. By the later returns for 1881, not yet published, he found that the ratio for protected districts remained at 74 per 1000, while that for unprotected districts underwent a further increase of 7 per 1000, the ratio being 126.—Mr. Macliver asked whether the noble lord's attention had been called to the increase of patients at the Naval and Military Hospitals at Stoke and Stonehouse, the number at the first place being 184, as against 118 last year, and at the second 100 against 45; and whether any steps would be taken by the Government to check the ravages of disease amongst our soldiers and sailors. Lord Hartington replied that there had undoubtedly been a large increase in the unprotected districts, which seemed to point to the presence of other causes as well as the suspension of compulsory examination. The Government preferred to await the result of further experience before deciding on any line of action.

The Indian Medical Service.

Mr. J. K. Cross, replying to a series of questions by Capt. O'Shea as to the India Office memorandum, said:—"I think my hon. and gallant friend assumes that paragraph 18 of the India Office memorandum guarantees to surgeons of five years' service who have passed the language test the substantive charge of a regiment, which alone commands the pay of 600 rupees per month. The first and governing qualification for the receipt of 600 rupees a month is that the 'five years' service language test man' shall be in substantive command of a regiment. Till then, he is only strictly entitled to unemployed pay. The Bengal Army List shows that on the 1st of January, 1883, of the eighty-four surgeons appointed during the six previous years, twenty-one were holding substantive or acting civil appointments at varying rates of staff pay, and eight had not passed the language test. Of the remaining fifty-five only four were in substantive charge of regiments, and therefore entitled to the full rate of salary prescribed in paragraph 18, but twenty-four were officiating for the actual holders of the appointments, and were drawing acting allowances, which, though less than the full rate of salary, are more than the unemployed pay. The twenty-seven remaining officers held no charge, either substantive or acting, and were drawing only unemployed pay as notified in the memorandum. This memorandum is the only official information furnished to candidates for the Indian Medical Service. It mentioned only the salaries of the substantive appointments tenable by medical officers, and does not refer to the rates of officiating pay, which are not substituted for the rates laid down in the memorandum, but are supplementary to them, being payments to officers who do not come under the conditions of the memorandum.

Cholera Questions.

In the House of Lords on Friday, Lord Carrington stated, in reply to Earl De la Warr, that the Government had no intention of returning to the quarantine system. There was nothing in the report of deaths from aggravated cases of diarrhœa to cause uneasiness, and there was no reason whatever for supposing that cholera had been imported into this country from Egypt.

On Monday, Earl De la Warr asked the intentions of the Government with regard to the importation of rags from Egypt. Lord Carrington replied that this trade was exceedingly small, probably less than 5000 tons a year. The Local Government Board had prepared a general order, and a special order was last week prepared with reference to a ship coming to Liverpool. Finding, however, that the cargo of the ship was intended for America, the order was not issued.—The Earl of Morley, replying to Lord Ellenborough, gave the medical returns relating to the troops in Egypt, for the week ending July 13, which showed that 8·21 per cent. of the whole strength were in hospital.

In the House of Commons, on Friday, Mr. Cross, in answer to Mr. O'Donnell, repeated his previous statement that during the last six months cholera had been little, if at all, more prevalent in India than usual.—Lord E. Fitzmaurice stated to Mr. A. Egerton that the last telegram with regard to the cholera at Cairo showed a considerable decrease in the number of deaths. There was reason to hope that the turn had come.—Sir Charles Dilke stated to Sir S. Northcote that there appeared to be no Asiatic or epidemic cholera in this country, and, so far as he knew, there was none in Europe up to the present time. The deaths from simple cholera in this country were not up to their ordinary average.

On Monday, Mr. Cross assured Mr. O'Donnell that the present epidemic of cholera in the Deccan was not of exceptional virulence; in fact, the ratio of mortality was lower than last year.—Lord E. Fitzmaurice stated to Mr. Macfarlane that no case of cholera had been reported on board any ship coming from India to Suez within two or three months preceding the outbreak at Damietta.—Dr. Lyons asked why the Irish Medical Schools and Colleges had not been allowed an opportunity of sending a contingent for special medical service in Egypt. Lord E. Fitzmaurice replied that in the twelve appointments which had been made on the recommendation of Sir Joseph Fayrer there was no distinction between Irishmen, Englishmen, and Scotchmen, but preference was given to those with Indian experience. Three out of the twelve were members of schools of medicine in Ireland, and an appointment was offered to a Doctor of Medicine of the Queen's University, but he declined it on private grounds.

On Tuesday, Lord Hartington, replying to Lord E. Cecil, read a telegram from the general officer commanding at Cairo, stating that the general health of troops was good, and that the type of cholera was less virulent.—Sir C. Dilke gave notice of a Bill to make better provision for the isolation and treatment of persons suffering from cholera and other infectious diseases.

On Wednesday, Sir A. Hayter, in replying to Viscount Folkestone, read another telegram to the same effect, and assured the House that there was no foundation for the very alarming rumours in some of the papers.

Mr. Gray brought in a Bill to make better provision for the prevention of outbreaks of dangerous infectious diseases.

On Thursday, Colonel Nolan asked if the Local Government Board were prepared with a temporary portable hospital, fit to be erected in any district on an outbreak of cholera. Mr. Trevelyan said this matter did not rest with the Local Government Board, but with several sanitary authorities, who had the subject before them, in consequence of the recent order of the Local Government Board.—Colonel Nolan and Mr. Gray gave notice of further questions on the subject.

Criminal Lunatics.

Mr. R. Paget asked the Secretary for the Home Department what steps, if any, had been taken to give effect to the various recommendations contained in the report of the Departmental Commission of the Home Office on criminal lunatics, which was presented to Parliament on November 9, 1882. Sir William Harcourt said the decision of the House of Lords decreed the liability to pay for carrying out the recommendations of the Commission. Therefore, substantially the great part of the object aimed at had already been accomplished. What further was necessary in the matter would be duly carried out.

St. Pancras Workhouse.

Mr. Hopwood asked the President of the Local Government Board whether the Vestry or Guardians of St. Pancras

have applied to the Local Government Board for advice as to the propriety of vaccinating women within a few hours after childbirth; and what, if any, answer had been given.—Mr. G. Russell said the guardians of St. Pancras had applied to the Local Government Board for advice in this matter, and the Board had replied that they had nothing to add to the expression of their views which was contained in the circular letter to Metropolitan Boards of Guardians on January 27th, 1881, and in the letter addressed to Mr. Dunlop in June last, of which a copy was sent to the Guardians. In the last mentioned letter the Board stated that they were advised that, while providing for the inmates of the several departments in the workhouse such revaccination was proper to guard each department from the danger of small-pox, it was undesirable to allow the accidents attending childbirth to become confused in the minds of the patients with the results of vaccination, and the medical officer would do well to hold this in view as affecting the question of revaccinating women within a short period after confinement.

New Bills.

Mr. Gladstone, in the course of a statement on public business, said the Government intended to proceed with a Bill dealing with the form of verdicts given in criminal cases in lunacy, and also with Sir C. Dilke's Bill on cholera precautions, for ensuring the more effective and regular action of public authorities.

Obituary.

ALEXANDER BARCLAY SHARPE, M.D. GLASG., M.R.C.S.E., L.S.A.

DR. SHARPE, who died on June 19th at his residence, Knight's-hill, Lower Norwood, was the youngest son of Alexander Sharpe, Esq., of Kilmahew, Cardross, Dumbartonshire. He was educated at the University of Glasgow, where, in 1847, he graduated in honours, becoming M.R.C.S. in the succeeding year. His first appointment was that of house-surgeon to the Glasgow Infirmary, after which he served as surgeon in the Indian Marine Service till 1852, when he commenced practice in Lower Norwood, where he resided till the time of his death.

At no time particularly strong, Dr. Sharpe's health had been more noticeably failing for the last four years. Frequent attacks of asthma, pleurisy, and pneumonia compelled him to relinquish part of his extensive practice and take temporary rest and change. Notwithstanding an attack of hæmoptysis last summer, he continued his work till the spring of this year, when a second and more severe one obliged him to desist. His death took place after a painfully lingering illness of over three months. Dr. Sharpe contracted ague whilst in India, and has been periodically affected by it ever since. During his last illness the attacks became more severe, and were complicated by diarrhœa, with great exhaustion.

Few general practitioners have succeeded in winning greater esteem and regard amongst their patients and friends than Dr. Sharpe. Not only on account of his professional capabilities, but also for his kind and self-sacrificing nature, he was valued by all who knew him. He took a lively interest in matters of scientific investigation and in all local movements. For some time he was surgeon to the 4th Surrey Volunteers and also to the Lambeth Industrial Schools. The respect which was shown by all classes at the interment was sufficient to show how generally the deceased gentleman will be missed in the neighbourhood.

ON the 28th ult., at a meeting held in the Holborn Town Hall, an Association was formed having for its object the interchange of ideas and experience between sanitary inspectors and inspectors of nuisances. It was proposed that monthly meetings should be held, and papers on sanitary matters should be read and discussed. Mr. Samuel C. Legg is hon. secretary.

THE new Convalescent Home at Southport, in connexion with the Cotton Districts Convalescent Fund, is to be formally opened by Earl Derby in October next.

Medical News.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—On July 26th the following gentlemen were admitted Licentiates of the College:—

Audland, William Edward, Merrick-square.
Barefoot, John Richard, Chesterton-road.
Barron, Hunter Jackson, M.B. Edin., Endsleigh-street.
Bassett-Smith, Percy William, Alexandra-road.
Beales, Thomas William Lewis, Holland-road.
Blagg, Arthur Frederick, Infirmary, Rochdale.
Cardozo, Samuel Nunez, Guilford-street.
Carlyon, Edward Tresiddy, River-street.
Cleaver, William Fidler, M.D. Kingston, Easy-row, Birmingham.
Collins, Edward Treacher, Albert-terrace.
Collins, Octavius Augustus Glaster, St. Bartholomew's Hospital.
D'Aguiar, João Gomes, Edward-street.
Dalton, Arthur John, Roslin Villas, South Norwood.
Davies, Edward Ciunegias, Portfaen, Lampeter.
Dowson, John, Guy's Hospital.
Edwards, Arthur Rea, King's College Hospital.
Embleton, Dennis Cawood, Park-crescent.
Gandevia, Naoroji Baranji, Whitehall-gardens.
Gardner, Thomas Frederick, University Hospital.
Green, Charles David, Shardeloes-road.
Gunn, Donald Stilwell, Park Village East.
Hodges, Herbet Chamney, Watton, Hertford.
Howard, Heaton Clark, Lansdowne-road.
Hubbard, Arthur John, Ladbroke-terrace.
Jennings, Robert, Haslingden, Manchester.
Johnston, George David, St. Thomas's Hospital.
Knill, Edwin Gilmore, Torrington-square.
Lathern, J. Simpson, M.D. McGill, Cornwall-road, Stroud Green.
Littlewood, John Oscroft, Guy's Hospital.
Llewellyn, David William Henry, St. Thomas's Hospital.
Mason, Arthur Henry, Granby-street.
Maughan, James, Bedford-street, Liverpool.
Payne, Frank Cobham, Plaistow.
Pinching, Horace Henderson, Milner-street.
Poison, James Ronald, Stoke Prior, Bromsgrove.
Pomfret, Henry Waytes, Hollingworth, Manchester.
Roberts, Arthur Henry, Greenhill-road.
Robinson, Clement Sumner, St. George's Hospital.
Rogers, Frederick Arthur, Grange-road, Ealing.
Salter, Stephen Thomas, Woburn-place.
Schofield, Alfred Taylor, Cambridge Gardens.
Shone, William Vernon, Granby-street.
Square, James Elliot, Eastbourne-terrace.
Stroyan, Frederick, Milman-street.
Tresidder, Harry Innis, Dulwich.
Waldy, John, Stafford-place.
Walker, Charles Rotherham, Gainsborough House, Leytonstone.
Walker, John William, Lidlington-place.
Walsh, John Henry Tull, Cancer Hospital, Brompton.
Ward, Anthony Arthur, Walpole-street.
Williams, John Worthy, Acre-lane.
Wilson, Alexander, Royal Infirmary, Manchester.
Withers, Oliver, New Basford, Nottingham.
Wood, Edward Archer, St. Mary's-square.
Wright, Gaskoin Richard Morden, Walworth-road.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having passed the required examination for the diploma, were admitted Members of the College at a meeting of the Court of Examiners on the 26th ult.:—

Dudley, William, L.S.A., Kidderminster.
Farraker, John Joseph, L.S.A., Cheshunt, Herts.
Griffin, S.N.R. Falk, L.S.A., Padstow, Cornwall.
Merrifield, Sydney Sargent, L.S.A., Plymouth.
Shone, William Vernon, L.R.C.P. Lond., Great Marlow.
Stevens, Francis Joseph, King-street, Kensington-square.
Street, Charles Tidbury, L.S.A., Barnetby, Lincolnshire.
Tireman, Arthur Lumley, Howden, Yorks.

The following gentlemen were admitted Members of the College on the 27th ult.:—

Brenton, William Hore, L.S.A., Plymouth.
D'Aguiar, J. Gomes, L.S.A., British Guiana.
Gunn, Donald Stilwell, L.R.C.P. Lond., Park Village East.
Hodges, James, L.S.A., Henley-on-Thames.
Jago, Charles Sprague, L.S.A., Torpoint, Cornwall.
Lace, William Francis, Pill, near Bristol.
Ogle, Arthur Wesley, L.S.A., Sevenoaks.
Parkinson, William Joseph, Bradford, Yorks.
Short, Thomas Sydney, L.S.A., Edgbaston.
Spencer, Herbert Ritchie, L.S.A., Atherstone.
Wood, Neville Thorald, Knightsbridge.

The following gentlemen were admitted Members of the College on the 30th ult.:—

Myddelton-Gavey, Edward Herbert, L.S.A., Hildrop-crescent.
Tenison, Edward Heron, L.S.A., Uxbridge-road.

Of the 257 candidates examined during the last fortnight 116 passed to the satisfaction of the Court and obtained their diplomas; 44 passed in Surgery, and when qualified in Medicine and the other subjects will be admitted Members; the remaining 97 failed to reach the required standard, and were referred to their further professional studies. Thirty-one

candidates who passed in Surgery at previous examinations, having subsequently obtained medical qualifications recognised by the College, were also admitted Members. This is the last examination for the present session.

COLLEGE OF PHYSICIANS IN IRELAND. — At the recent examinations in July Mr. Frederick Josiah McNaught obtained the Licences in Medicine and Midwifery of the College. He had not been admitted at the time the other names were furnished. The following have obtained the certificate in Sanitary Science:—

Adela Bosanquet. | Elizabeth Longhead.

APOTHECARIES' HALL. — The following gentlemen passed the examination in the Science and Practice of Medicine, and received certificates to practise, on July 26th:—

Bowen, Randall Edward Arthur, Stockwell.
Chalmers, Alex. Henry, Howard-road, Penge.
Dyer, Sidney Reginald, Harlesden.
Harris, Charles Joshua Joseph, Strathblaine-road, Wandsworth Common.
Jollye, Arthur Dixon, Donington, Spalding, Lincolnshire.
Lace, William Francis, Pill, near Bristol.
Travis, William Owen, Liverpool.
Williams, Frederic Newton, George's-square.
Wilson, William, Drumbain, Ayr, N.B.

The following gentlemen also on the same day passed the Primary Professional Examination:—

Henry Taylor Brickwell, London Hospital; John William Francis Long, Guy's Hospital.

Mr. Edward Thomas Thring, L.R.C.P.E., of University College Hospital, has been elected to the Medical Scholarship of the Society of Apothecaries, the annual value of which is £100 tenable for two years.—The Surgical Scholarship will be competed for at the close of the winter session 1883-4.—At a meeting of the Court of Assistants of the Society, held on the 30th ult., the gold medal for Botany was presented to George Bernard Hoffmeister of St. Bartholomew's Hospital; the silver medal and a book to Frederick William Green, also of St. Bartholomews.—The examination for prizes in Materia Medica and Pharmaceutical Chemistry will take place on Wednesday, August 15th.

THE Library of the Obstetrical Society will be closed from August 13th to September 13th.

VACCINATION GRANT.—Mr. Howard of New Buckenham, Norfolk, has again received a grant from Government for successful vaccination.

MR. CHARLES ROBINSON, M.R.C.S., L.S.A., late medical officer for the Goldington District of the Bedford Union, has received a superannuation allowance of £15 per annum.

SOCIAL SCIENCE ASSOCIATION. — In the Health Department of this Association, Mr. T. Pridgin Teale has been appointed president, and Br. Seaton and Mr. H. H. Collins hon. secretaries, for the ensuing year.

SIR EDWIN SAUNDERS, Dental-Surgeon to H.M. the Queen, has presented the leasehold premises, 39, Leicester-square, adjoining the Dental Hospital of London, value £2400, to the authorities of that institution for the purpose of its enlargement.

GLANDERS.—A serious outbreak of glanders among the horses of the 3rd Hussars and P Battery 2nd Brigade Royal Artillery has occurred at Aldershot, necessitating the immediate slaughter of several of the animals and the movement out of permanent quarters of the Hussars to Bourley and the Artillery to Jersey Brow, where they will encamp till further orders.

QUEEN'S COLLEGE, BELFAST.—The following were awarded prizes at the termination of the summer session:—Botany: Senior Division, W. J. Munce; Junior Division, John Campbell, R. W. Boyd, W. M. Kellen, Jas. Buchanan, Practical Chemistry: J. D. Smyth, Samuel Moore, J. W. Wilson, Sam. Matthews. Medical Jurisprudence: James Morwood, Hugh Lewers, J. R. Barrows, J. S. Lyttle, and Thomas Grainger (equal).

ADMINISTRATION OF HOSPITALS.—The first meeting of the provisional committee of hospital managers, appointed at the recent Conference held under the auspices of the Social Science Association, took place on Monday last. Steps were taken for adding further names to the committee, and a sub-committee was appointed to prepare a draft programme for consideration by the enlarged committee, the members of which will be called together in the autumn.

MR. WILLIAM FRANCIS PURLAND, L.S.A., aged eighty-two, formerly a parochial medical officer in the Woolwich Union, was on the 25th ult. found dead in bed with three bottles containing hydrocyanic acid by his side. At the inquest a letter written by deceased, and addressed to the coroner, was read, and afforded distinct evidence of mind failure on the part of the writer. The verdict arrived at was "Suicide from mental aberration and infirmity from old age."

MANCHESTER ROYAL INFIRMARY. — By the report just issued, it appears that the income last year of the Manchester Royal Infirmary, the Convalescent Hospital, and the Fever Hospital at Monsall amounted to £27,425, less by £132 than that received in the preceding year; the expenditure had been £26,339. The number of in-patients during the same period in the three institutions had been respectively 4259, 1453, and 703. Each in-patient had been under treatment on an average 21·27 days at the Infirmary, 29 days at the Convalescent Hospital, and 20·57 days at Monsall Fever Hospital. The Royal Lunatic Hospital at Cheadle, in connexion with the infirmary, is stated to be self-supporting, and its condition to be highly satisfactory.

THE MEDICO-PSYCHOLOGICAL ASSOCIATION.—The annual meeting of the Medico-Psychological Association was held on Friday, July 27th, at the Royal College of Physicians, London, Dr. Orange, of Broadmoor, presiding. After a vote of thanks to Dr. Gardner, the outgoing president, the appointment of officers, &c., took place. Dr. Manley was appointed president for the ensuing year. New statistical tables, which had been on trial for a year, were adopted, subject to certain revision. At the afternoon meeting Dr. Orange delivered his presidential address on the subject of Criminal Lunatics, and a long and important discussion ensued, in which Dr. Bucknill, Dr. Hack Tuke, Dr. Nugent, and others took part. A resolution was ultimately adopted to the effect that prisoners suspected of being mentally deranged should be examined by competent medical men as soon as possible after the commission of the crime with which they were charged, such examination to be provided by the Treasury, the examiners being the prison medical officer, the county asylum medical officer, and a neighbouring practitioner.

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning at the latest.*

BEEVOR, CHARLES E., M.D.Lond., M.R.C.P., has been appointed Assistant-Physician to the National Hospital for the Paralysed and Epileptic, Queen-square.

BENNETT, Mr. F., has been appointed House Surgeon to the Manchester Royal Infirmary.

BROCKLEHURST, THOMAS HOWARD, M.R.C.S., L.S.A.Lond., has been appointed Medical Officer of Health for the Matlock Urban Sanitary District, vice Knox, whose appointment has expired.

CREAGH, WILLIAM, M.D.Dub., L.R.C.S.I., has been appointed Medical Officer for the Rolleston District, Burton-on-Trent Union; also to the Clifton District, Tamworth Union.

CURTIS, WILLIAM, M.R.C.S., L.S.A.Lond., has been appointed Medical Officer of Health for the Alton Urban Sanitary District, vice Leslie, whose appointment has expired.

DAY, EDW. JOS., M.R.C.S., L.S.A.Lond., has been appointed Medical Officer for the Fordington District of the Dorchester Union.

DEVONALD, A., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer for the Llannon District of the Llanelly Union.

EVANS, Mr. W. A., has been appointed House Physician to the Manchester Royal Infirmary.

FENNER, ROBERT, M.R.C.S., Surgeon to the Newfoundland Copper Mining Company, has been appointed Health Officer for the District of Notre Dame Bay, Newfoundland.

FISHER, FRED. BAZLEY, L.R.C.P.Lond., M.R.C.S., has been appointed Medical Officer for the Broadmayne District of the Dorchester Union.

GIBB, WILLIAM, M.B., C.M., has been appointed Assistant-Physician to Woodilee Asylum, Lenzie, vice John Keay, M.B., C.M., resigned.

GIDDINGS, WM. KITTO, M.R.C.P.Ed., M.R.C.S., L.S.A.Lond., has been reappointed Medical Officer of Health for the Calverley Urban Sanitary District.

GREENE, F. W., L.R.C.S.I., M.B. Univ. Dub., has been appointed Medical Officer to the Mallow Union Hospital, co. Cork.

HARRIS, CHARLES, M.D. St. And., M.R.C.S., L.S.A.Lond., has been reappointed Medical Officer of Health for the No. 2 District of the Rye Rural Sanitary Authority.

HARTLEY, JAMES, L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer for the Downton District of the Alderburg Union.

HILL, J. HIGHAM, M.D., F.R.C.S., has been appointed Government Medical Inspector for the United States of America at the Port of London.

HOSEGOOD, WILLIAM, M.B., M.S.Ed., has been appointed Medical Officer of Health to the Amersham Rural Sanitary Authority.

HUGHES, THOMAS J., M.R.C.S., L.S.A.Lond., has been appointed Medical Officer for the First District and Workhouse of the Church Stretton Union.

ISTANCE, R., M.R.C.S., L.S.A.Lond., has been appointed Certifying Factory Surgeon for the Risca District, Monmouthshire.

JONES, Mr. J. HARVEY, has been appointed House Physician to the Manchester Royal Infirmary.

KING, DAVID A., M.B.Lond., M.R.C.P., has been appointed Assistant-Physician to the Hospital for Diseases of the Chest, Brompton, vice Dr. Owen, resigned.

MILLS, Mr. WILTON, has been appointed House Surgeon to the Manchester Royal Infirmary.

MOORE, Mr. E. H., has been reappointed Public Analyst for the Eastern and Western Divisions of Sussex.

PHILLIPS, HENRY A., M.B., M.S.Aber., M.R.C.S., L.S.A.Lond., has been appointed Medical Officer for the No. 4 District of the Chesterton Union.

SKINNER, ROBERT VAILE, M.R.C.S., L.S.A.Lond., has been reappointed Medical Officer of Health for the No. 3 District of the Rye Rural Sanitary Authority.

VERDON, WILLIAM, M.D., F.R.C.S.Eng., L.S.A.Lond., has been appointed Medical Officer of Health for Lambeth.

WANKLYN, Mr. J. A., has been reappointed Public Analyst for the City of Peterborough.

WILLEY, C. HENRY, M.B., C.M., B.Sc.Ed., M.R.C.S., has been appointed Resident Medical Officer to the Borough Hospital for Infectious Diseases, Sheffield.

WOODHAMS, —, M.R.C.S., L.S.A.Lond., has been reappointed Medical Officer of Health for the No. 1 District of the Rye Rural Sanitary Authority.

Births, Marriages, and Deaths.

BIRTHS.

COOPER.—On the 28th ult., at Stainton Lodge, Blackheath, S.E., the wife of Peter Cooper, L.R.C.P.I., M.R.C.S., of a daughter.

DUCAT.—On the 25th ult., at Gloucester House, St. Paul's-road, Highbury, the wife of Andrew D. Ducat, M.D., of a daughter.

FAUSSET.—On the 19th ult., at Tamworth, the wife of Herbert J. Fausset, M.D., of a son.

HARRISON.—On the 27th ult., at Falland Lodge, Guthrie-road, Clifton, the wife of A. J. Harrison, M.B. Lond., of a son.

ROUTH.—On the 28th ult., at St. Leonard's-on Sea, the wife of A. C. Routh, M.R.C.S., of a son.

STARTIN.—On the 28th ult., at The Highams, Surbiton-hill, the wife of James Startin, Sackville-street, Piccadilly, of a son.

MARRIAGES.

FLOYER—JONES.—On the 26th ult., at the Parish Church, Codicote, by the Very Rev. Lord Alwyne Compton, Dean of Worcester, assisted by the Rev. L. B. Morris, Rector of Birdsall, York, cousin of the bride, Frederick Anthony, second surviving son of the late Rev. Ayscoghe Floyer, and grandson of the late Hon. Frederick Shore, to Alice Maude, younger daughter of the Rev. T. R. Jones, Vicar of Codicote, Herts.

FORREST—SEMPLE.—On the 17th ult., at St. Saviour's Church, Redland, Bristol, James Rocheid Forrest, M.R.C.S., to Lilia Helen, eldest daughter of the late Henry Semple, late Captain 60th King's Royal Rifle Corps.

GWYNNE—HANNA.—On the 24th ult., at St. Peter's Church, Dublin, Charles Nelson Gwynne, B.A., M.B., of Brightfield House, Sheffield, son of the late Rev. George J. Gwynne, formerly Rector of Lisgoold, in the County of Cork, and Canon of Cloyne, to Grace Mannsell, eldest daughter of the late Samuel Hanna, of Tonoughmore, co. Down, and Carduff, co. Dublin, and late Resident Magistrate of county Wicklow.

HOLTON—NICHOLSON.—On the 26th ult., at St. Pancras, Euston-square, Charles John, eldest son of Charles Holton, M.R.C.S. and L.R.C.P., of Stoke Hall, Stoke-on-Trent, to Amy Florence Caroline, eldest daughter of John Nicholson, of General Post Office and Burton-crescent, Tavistock-square.

RAVEAU—WAITE.—On the 26th ult., at the Parish Church of St. Marylebone, Paul Antoine Raveau, of Paris, to Mary Waite, M.D. (Paris), daughter of the Rev. B. Tregaskis, and widow of the Rev. John Waite.

STEWART—LIBERTY.—On the 26th ult., at St. Mary's Church, Nottingham, Donald Stewart, M.D., son of the late Robert Stewart, Glenharr, Cantyre, Argyll, to Ada Rebecca, second daughter of Arthur Liberty, Cranmer-street, Nottingham. No cards.

DEATHS.

BRADFORD.—On the 23th ult., at San Francisco (while on sick leave from Hong Kong), Henry Bradford, Surgeon-Major A.M.D., fourth son of the late Rev. John Bradford, Vicar of Pinhoe, Exeter, aged 53.

KEARNEY.—On the 19th ult., at Morpeth, James P. Kearney, L.R.C.S.I., aged 36.

LEWIS.—On the 30th ult., at El Warden, near Cairo, of cholera, Charles Blake Lewis, L.R.C.P. Ed., M.R.C.S., A.M.D., eldest son of the late Charles Warner Lewis, Barrister-at-Law, aged 29.

MEASE.—On the 27th ult., suddenly, at Cavan, Andrew Mease, M.B. Dub., L.R.C.S.

MORRIS.—On the 22nd ult., at Upper Welland-terrace, Spalding, Eleanor, the lamented and dearly beloved wife of Clarke Kelly Morris, aged 27.

PERKINS.—On the 24th ult., at Brussels, Emily, the relict of John Perkins, Esq., M.D., born at Spilsby on April 25th, 1799.

N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Stewart's Instruments.)

THE LANCET OFFICE, August 2nd, 1883.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp	Rain fall.	Remarks at 8.30 a.m.
July 27	30·14	N.E.	59	55	109	67	53	..	Overcast
,, 28	30·12	N.E.	57	53	110	74	53	..	Cloudy
,, 29	29·89	W.	66	58	113	74	52	..	Cloudy
,, 30	29·61	S.W.	61	57	90	68	54	·05	Overcast
,, 31	29·72	W.	61	58	109	75	56	·02	Overcast
Aug. 1	30·01	W.	61	55	110	65	55	·02	Bright
,, 2	30·21	W.	61	56	105	72	54	..	Overcast

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe, or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

RESISTANCE OF NEGROES TO DIPHTHERIA AND SCARLET FEVER.

THE American *Medical News* has recently published statistics showing the number of deaths from diphtheria and scarlatina in the year 1881 among the coloured and white races in cities with a large mixed population. Summarising the facts, it is found that in 14 cities, with an aggregate population of 1,156,801, of whom 871,886 were white and 284,915 coloured people, the total of recorded deaths from scarlet fever for the year 1881 was 526, and of this number 441 occurred among the white population, and only 85 among the coloured. Had the negroes died in the same proportion as their white neighbours, the deaths among them would have amounted to 144. As regards diphtheria, it appears that in a population of 501,728, of whom 331,706 were white people and 170,022 coloured, diphtheria was the cause of 211 deaths in white people and 73 in coloured, and if the coloured had suffered in the same proportion as the white people, the number of deaths among them would have amounted to 100. These figures do not of course show that the negro has any comparative immunity from these diseases, but only that he does not *succumb* so readily to these specific poisons. When, however, it is borne in mind that among the negro population in these American cities the external conditions most favourable to the spread and high mortality of both these diseases prevail—overcrowding, dirt, bad nursing, bad food, neglect of proper medical treatment in the earlier stages and milder cases of the diseases—these figures really express only half the fact, or rather they lack that emphasis which is heard in nature.

HOW TO PREPARE WATER FOR DRINKING.

To the Editor of THE LANCET.

SIR,—"Boil and filter" is I think a better rule than "filter and boil." In either case no doubt the water is made safe, but it is only in the former case that it is again made palatable. Boiled water is very unpleasant to drink, as it has lost in that process all its aeration. My plan for years has been to have a tin can, large enough to contain all the water usually drunk in a day, filled from the kitchen boiler when the cooking is in full swing and the water actually boiling. This can is placed beside the filter until the next morning to cool, and then the filter is filled up and the can refilled with boiling water. The filtering completely affects the re-aeration of the water, and no one would suspect that it had been boiled. Many people would sooner drink pleasant-tasted, though vitiated, water than pure water which has lost its air, and to induce such people to boil their water it is necessary to re-aerate it. Therefore boil first and then filter.—I am, Sir, yours, &c.,

Haslemere, July 31st, 1883. J. WALLACE.

"TAXES ON CARRIAGES."

Mr. Moorman, M.R.C.S., L.S.A., of St. Columb, does not agree in the "suggestion that medical men keeping carriages as necessary in the conduct of practice should be exempt from the Carriage Tax. I have," he observes, "been a taxpayer on this account and under the circumstances stated for forty years out of my fifty-three years' term of practice, and cannot see any unfairness in the principle of the tax as imposed upon the medical profession or upon those of any other occupation requiring carriages for business purposes. But I do think the subject of taxation should be entertained for a class of gentlemen who in the last few years have had the luxury and convenience of bicycles for travelling purposes, especially as the use of these dangerous vehicles is, as it were, an institution of the country. I call these things dangerous because the use of bicycles on the public roads has been known to frighten horses drawing taxed carriages, thus putting in peril the lives, limbs, and property of the occupants of such taxed carriages. I remember, too, the time when, as an owner of horses, I was a payer of the Horse Duty; but I cannot recollect that we, as medical men, were favoured by partial exemption from tax, as Mr. Cartmel says. . . . It seems to me that if a section of the English public has indeed a right to complain of unjust taxation, such cause will be found amongst the few of England who are the victims of the wicked and cowardly Income Tax Act."

ANNUAL OUTINGS.

FEW more amiable phases of benevolence exist than that which is exhibited in the efforts made to provide a day's enjoyment in the green fields or at the seaside for very poor children. Of course the direct physical benefits derived from such excursions must be transitory, though even these are not to be undervalued; but the mental and moral effects are surely in the aggregate of incalculable worth. There is a fashion in charity, as in other things; but the present rage for juvenile excursions in connexion with cottage missions, and so releasing the little ones though only for a day from the stifling atmosphere of squalid courts and alleys, is good and wholesome in its tendency, and has our cordial sympathy.

Mr. H. Cooper.—Yes. The Public Health Act (1875) authorises the construction and maintenance of infectious disease hospitals at the cost of the local rates. In the metropolis somewhat different arrangements exist.

"INFANTILE CONSTIPATION."

To the Editor of THE LANCET.

SIR,—In your issue of June 30th, which has just reached me, I observe Mr. Seymour makes inquiry for some means to relieve infantile constipation. As I have had some similar cases, I would recommend him to use simple olive oil in half teaspoonful doses night and morning for an infant of the age he mentions. The treatment might be begun by giving a sharper aperient first and then continue with the oil. When the motions begin to be more repulsive, add to the dietary two or three teaspoonfuls of oatmeal-water three times a day, and also allow the child to have plain water occasionally during the day when thirsty—say a teaspoonful or two. I would also recommend Mr. Seymour to examine the anus well for marginal constriction if he has not already done so.

I append notes of a case of the kind which occurred in my practice some years ago:—Some time in December, 1877, I was asked to see a little boy aged eight months and a half old, said to be suffering from constipation. I learned that for some time past he had had some difficulty in defecating. Thinking it a simple affair, as the boy seemed perfectly healthy, I merely ordered a suitable change of diet, and for a day or two gave an aperient. This was followed by partial relief, but still he used to strain a great deal and get very red in the face whenever the bowels were moved. The fæces seemed quite natural in every particular since the change in diet. Towards the end of the month I examined the rectum, and found a ring of connective tissue encircling the margin of the anus. The insertion of the tip of my little finger caused considerable pain, and it was tightly grasped by the constricting ring. On Jan. 10th, 1878, I was called in hurriedly, as he had been trying to defecate for upwards of an hour, straining very hard and crying; but nothing would pass. I removed the fæces with a small instrument, and of course gave immediate relief, but the little fellow was much exhausted. I now examined the rectum as high as I could reach, and found it normal. Next day I went up prepared to operate, fearing that the boy might rupture himself or even cause an invagination during such powerful expulsive efforts. When I arrived the rectum was loaded, and on introducing an oiled finger and again withdrawing it, the fæces followed it out about an inch, and then were tightly grasped by the marginal ring and held firmly. This showed that the expelling power was natural, as also were the fæces, and that the only interference was the constricted margin of the anus. I cleared out the bowel, and with a probe-pointed bistoury divided the ring freely in two places, one on either side of the posterior median line. From that day forward the bowels moved naturally and painlessly. The wounds healed rapidly, and the bleeding was very slight. Years have now elapsed, and he has had no return of the difficulty. I am, Sir, yours truly,

R. W. POWELL, M.D.

Rideau-street, Ottawa, Canada, July 11th, 1883.

MR. LISTER ON THE USE OF THE SPRAY.

THE *Medical Record* of New York publishes the following letter addressed to Mr. Henry Gray Croly, of Dublin, in answer to an inquiry of Mr. Lister whether he had given up the spray in operations:—

"Dear Mr. Croly,—I have not given up the use of the spray, although I certainly regard it as the least important part of our antiseptic arrangements. Whatever other good it may do, it is a very mild form of antiseptic irrigation, and tends to keep the *entourage* of the wound, including the surgeon's hands and instruments, pure. But if I had not a spray-producer at hand, I should not on that account omit other elements of antiseptic treatment. I still use the spray in changing dressings, so long as the wound is not merely superficial. But far more important than using the spray is it to make a point of covering the wound with some pure antiseptic material before beginning to wash the parts, which were covered with the edge of the dressing only, and were therefore impure. In other words, I believe one of the commonest causes of failure is dabbing alternately the impure surrounding parts and the pure wound with the same piece of rag, which, though moistened with carbolic lotion, cannot work miracles.—Believe me, yours very truly, JOSEPH LISTER."

VACCINATION.

DR. J. COATSWORTH WATSON, public vaccinator for the Sunderland and East Bishopwearmouth Districts of the Sunderland Union, forwards us a copy of memoranda for parents, which he is in the habit of presenting to each attendant at his station. The instructions are highly judicious, and attention on the part of parents to the suggestions made in the "memoranda" would go far to obviate the risks of erysipelas, the occurrence of which now and then is so greedily laid hold of by anti-vaccinationists to discredit the value of vaccination.

Amblyopia.—We think there must have been an error of observation. The difference is too great to be accounted for by the different men using the opposite eye. The wind may have been blowing from a different direction at the periods when the two men aimed at the target.

A Subscriber.—The heart of the turtle is composed of two auricles, and of a ventricle with two unequal chambers communicating with each other.

Mr. J. H. Timin's letter arrived too late for insertion this week.

DISUSED BURIAL-GROUNDS.

To the Editor of THE LANCET.

SIR,—In your issue dated July 28th you sympathise with the vestry of Bethnal-green in its endeavour to prevent the erection of dwellings on the disused burial-ground in Peel-grove, and censure the use of such soils for building purposes until a long time after all the bodies are entirely decomposed, while in the same issue you draw attention to the fact that the Kyrle Society have offered to "lay out" the churchyard of St. Peter's, Hackney-road, as a recreation-ground for adults, and remark that "The disused churchyard of St. Leonard's, Shoreditch, has been thrown open as a recreation-ground for the people, many hundreds of children especially availing themselves of the opportunity of using it as a playground." I should very much like to know how such "recreation-grounds" are to be regarded from a sanitary point of view, as it seems to me that their frequenters must be surrounded by noxious exhalations, if not indeed by the germs of infectious diseases. Pasteur found that infection was still spread from the buried carcases of animals that had died of splenic fever ten years before. Is it, then, not probable that the specific poisons of other diseases, small-pox, scarlet fever, &c., are equally long enduring? If so, until the victims of infectious diseases are buried together with disinfectants—such, for instance, as chloride of lime—our burial-grounds must be looked upon as little less than hotbeds of disease. The best disinfectant is fire. To quote again your issue of the 28th, "The Municipal Council propose establishing 'crématoires' in three of the principal cemeteries of Paris, which, in anticipation of cremation becoming legal, are to be used only in case of an epidemic (of cholera) breaking out." Here I would raise three questions: Why should not cremation be made legal? If in Paris, why not in England? And if it may be practised in the case of cholera, why not for all infectious diseases? I am, Sir, yours, &c.,

July 31st, 1883. A. S. B.

Mr. W. J. Clarke.—We must refer our correspondent to our Students Number.

Mr. Cooney.—The papers are marked for early insertion.

TWINS.

To the Editor of THE LANCET.

SIR,—I do not know whether amongst the medical profession generally my fellow practitioners have met with a proportionate amount of dual births as have fallen to my share during the last year ending July 27th. In the past twelve months I attended ninety-six labours, nine of them being twin births. The mothers in all cases, I am glad to say, have done well, the percentage of mortality amongst the offspring being 25 per cent.—I remain, Sir, yours truly,

CHARLES CHITTENDEN, L.R.C.P.E., &c.

Preston House Lee, July 30th, 1883.

MEDICAL WORK IN CONNEXION WITH THE KASHMIR MISSION.

MR. ARTHUR NEVE, surgeon to the Kashmir Mission Hospital, has published, in the form of medical notes, a brief *résumé* of the work done in the institution during the past year. As a general rule, motives of economy lead to various modifications of the antiseptic system, such as cotton-wool saturated with carbolic spray, &c., but with strict attention to details good results were attained in several cases of amputation and abdominal surgery, and it is stated that the stricter the Listerism the greater the success. Spanton's operation for the radical cure of hernia has been performed in many cases during the year, and usually with complete success. During the first quarter of 1882, 191 operations were performed; during the second, 591; during the third, 306; and during the fourth, 150; whilst the number of new patients admitted during the year was 7562.

METEOROLOGY.

A SHORT article on "Meteorology at Home and Abroad" in the current number of *Longman's Magazine* is worthy of perusal by those who, not having devoted attention to the subject, wish for some information about it. Mr. R. H. Scott, the author, approves the application of national funds to the furtherance of meteorological inquiry, touches upon the history of the science, and gives a brief description of its present position in various parts of the world.

Defective Memory.—We have no knowledge of the system or of its author.

Practitioner is thanked. The matter shall not escape notice.

ROTTEN FRUIT.

To the Editor of THE LANCET.

SIR,—Now that there is a great increase in the bills of mortality from diarrhœa and so-called English cholera, and with every probability of a still greater pestilence appearing in our midst, can nothing be done to prevent the wholesale delivery of rotten and putrid fruit and vegetables to the public?

The plan of proceeding is as follows:—A heap of rotten fruit is made up, and a little good fruit is placed in front to tempt the unwary. The customer is served from the back of the heap. If the unlucky purchaser be an adult, he selects the best, if there is any, and throws the most rotten into the gutter. This is immediately pounced upon by our little waifs and strays, and at once greedily devoured. If the purchaser be a child with his only bronze, the whole of the stock is frequently consumed, to be only too surely followed by the attack of inexplicable pain, vomiting, diarrhœa, and perhaps death of the innocent victim.

The butchers, the bakers, and other distributors of food are looked after from time to time by our sanitary officers, but the dealer in fruit and vegetables seems to escape altogether; for on all hands, and especially in our poorer neighbourhoods, rotten fruit and rotten vegetables seem the order of the day. The recent almost tropical weather has forcibly drawn our attention to this matter, as we have frequently seen so-called fruit, notably strawberries and cherries, sold to the public in a state of absolute putrescence.—I am, Sir, yours truly,

Kennington-park-road, London, S.E., ALBERT S. MORTON.
July 23rd, 1883.

An Old Westminster must take counsel of his lawyer or of some medical friend who has experience of such complicated relations.

EXAMINATIONS.

To the Editor of THE LANCET.

SIR,—As much has been written against Scotch examinations, I think it would be better for us to look into our own examinations, especially that conducted for the membership of the Royal College of Surgeons of England, which I must say is nothing more than a lottery. There are many of your readers who I am sure would agree with me in saying that they have seen many deserving men fail for not giving the examiners' own views on some subject; and others again, with only a smattering of their work, get through by chance, because they just happened to get those questions they knew. To state my own case, I went up for the membership three months before going up for the B.S. degree, and was referred. I then got my degree, and went up soon after for the second time, and was referred again—why I cannot say, except for the strange views of some of the examiners, not mentioned in our text-books. Since then I have found out many other cases where men with surgical degrees and diplomas have been referred. These men, like myself, I am sure will not trouble those examiners again. This only shows the absurdity of the examination, and I hope that when the Conjoint Board examination is brought about they will have a better way of examining.

I am, Sir, yours, &c.,
July 19th, 1883. VERITAS.

Mr. A. C. Horner.—We think our correspondent's view is a reasonable one.

TREATMENT OF CHOLERA.

To the Editor of THE LANCET.

SIR,—Has ether injected hypodermically been used in cholera? I should think it ought to be useful in the stage of collapse to promote reaction.

I am, Sir, yours truly,
July 30th, 1883. C. J.

SUNSPOTTERY.

UNDER the above title, which aptly designates a very modern development of a very ancient science, Mr. J. A. Westwood Oliver has issued a pamphlet the aim of which is to give an impartial view of a subject the importance of which has by some been unduly exaggerated and by others unreasonably depreciated. The subject is dealt with in four divisions—(1) the solar furnace, its distance, its size, its physical nature, the heat it radiates, and how it is supplied with fuel; (2) the solar spots, their phenomena, their periodical variation, and—what is the root of the whole science of sunspottery—their relation to solar activity; (3) an eleven-year period in meteorological phenomena; and (4) the alleged connexion between the occurrence of famines, pestilences, &c., and the number of spots. The conclusion the author deduces from the fact he states is "that sunspottery is not what it is represented to be, but is for the most part humbug."

Young Practitioner.—As our correspondent was not engaged to attend, it is doubtful whether he could recover the midwifery fee. But he should charge for two visits.

J. T. B.—Soon.

TREATMENT OF VARICOCELE.

To the Editor of THE LANCET.

SIR,—As there has been some correspondence in your columns on the treatment of varicocele, I wish to draw attention to a procedure adopted at the Melbourne Hospital, and first practised by Mr. T. N. Fitzgerald, senior surgeon. The operation performed is that of acupressure, with subcutaneous section of the vein between the pins, as suggested by Mr. Lee. Instead, however, of withdrawing the pins on the fifth day, as Mr. Lee advised, they are removed in a few hours. First the distal pins are removed in twelve or even six hours after their insertion, then the proximal pins about twelve hours after the distal. Mr. Fitzgerald has now operated in this way so many times, both in varix and varicocele, without a single untoward result, that he is confident there is not the slightest risk in so doing; on the contrary, there is every advantage. The object of the operation, based on the physiological process observed in natural cure, is to obliterate the vein by causing coagulation within it, clot and vein together shrinking till they form an impervious cord. The pins exclude the portion of vein between them from the circulating blood while the clot is forming, but when in a few hours coagulation is complete they are no longer needed, because if the vein be thoroughly divided, its cut ends retract, and form an effectual barrier to the restoration of the circulation through the vein. The longer the pins are left the more likely are they to excite inflammation, which, if it does not go on to a dangerous phlebitis, is very apt to produce ulceration and sloughing, leaving a sore difficult and tedious to heal.

I am, Sir, your obedient servant,
G. ADLINGTON SYME, Resident Surgeon.
Melbourne Hospital, May 28th, 1883.

Mr. Wm. Hayes.—Thanks. We fear we have not space to devote to the report.

ARREST OF DEVELOPMENT.

To the Editor of THE LANCET.

SIR,—The other day I was called in to see an infant of a few days old, who was said to be a cripple. On examining her, I found that the shoulder girdle was all right; the scapula, clavicle, and coracoid process could be distinctly traced on each side, but on the left the head of the humerus was inserted into a socket about one inch below the acromion, presenting very much the appearance of a luxation. There was an absence of the radii, and each hand was represented by four fingers, the index being shorter than the others, and a bifurcation from the middle finger. The thumb was absent. The styloid process of the ulna was very prominent, and the hands were pronated and resisted all efforts at supination. Instead of the natural rotation of a quarter of a circle backwards, the rotation was in the opposite direction or forwards, and naturally produced a foot-like appearance. The lower extremities were normal, the tibiæ, of which the radius is the homotype, being present. The mother attributed the misfortune to having seen some dancing bears in the street some time during the early months of pregnancy.

This is the only example of the kind I have met with, and does not appear to be anything like so frequent as the ununited premaxillary bone, which is so great a deformity in cleft palate and hare-lip. The child is now two months old, and, with the exception of two slight attacks of convulsion, is thriving and healthy.

I am, Sir, your obedient servant,
G. ASHMEAD, L.R.C.P. & L.R.C.S. Edin.,
Brierley-hill, July 8th, 1883. Medical Officer of Health.

Inquirer.—The title "Surgeon" does not attach to the qualification mentioned.

TEA-TASTING.

To the Editor of THE LANCET.

SIR,—I shall be very glad if you will kindly permit me to ask, through your columns, whether the business of a "tea-taster" is attended with much, or any, risk to health; and, if so, what prophylactic measures are likely to be of benefit?—I am, Sir, yours sincerely,

ROBERT J. BANNING, M.D.
Ashbourne House, Lordship road, Stoke Newington, N.,
July 30th, 1883.

ERRATUM.—In the paragraph under the heading "Cholera precautions" in the Paris letter, page 166 of THE LANCET of last week, for "Jules Guérin," read Jules Quentin.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Grally Hewitt, London; Mr. W. H. Denham, Southsea; M. Dinin, Paris; Mr. Maythorn, Biggleswade; Dr. A. T. H. Waters, Liverpool; Dr. Cartwright Reed, South Africa; Mr. Mansell Moullin, London; Dr. Banning, London; Mr. R. G. Jack, London; Mr. C. E. Jennings, London; Mr. R. Morison, Hartlepool; Miss A. S. Ballin, London; Mr. Lammiman, Tunbridge; Mr. Grosholx, Aberdovey; Mr. Wallace, Haslemere; Mr. Horner, Tonbridge; Miss M'Mullin; Dr. Maclean, Glasgow; Mr. Strong, London; Mr. Chittenden, Lee; Dr. H. Simpson, Rugby; Mr. C. E. Marr; Mr. F. Galton; Mr. Moorman, St. Columb; Mr. Wm. Hayes, Dublin; Dr. T. Orme Dudfield, London; Mr. Pink, London; Mr. R. Skinner, Berne; Dr. Boys, Pill; Mr. Bernard Roth, London; Messrs. Calvert and Co., Manchester; Mr. Barr, Liverpool; Mr. Jack, Bayswater; Mr. Fitzmaurice, Linkinhorn; Dr. C. Hewitt, London; Mr. Hamel; Mr. H. Kimpton, London; Messrs. Oliver and Boyd, Edinburgh; Mr. Hunt, Chertsey; Dr. Bristowe, London; Messrs. Potter and Co., London; Messrs. Finlay and Co., Liverpool; Mr. Fletcher, Shatley; Dr. Thornton, London; Mr. Schnider, London; Mr. Willey, Birmingham; Mr. Armstrong, Manchester; Mr. Hughes, Streatham; Mr. Spencer, Sheffield; Mr. Butler, London; Mr. Oliver, Manchester; Messrs. Chance and Bland, Gloucester; Mr. Skinner, Thun; Dr. Mayens, St. Thomas's, West Indies; Messrs. Grogan and Boyd, London; Mr. Salmon, Hornsey; Messrs. Latimer and Glanville, Exeter; Messrs. Beal and Co., Brighton; Mr. Smith, Kingsland; Mr. Van Praagh, London; Messrs. Bell and Bradfute, Edinburgh; Messrs. Robertson and Scott, Edinburgh; Messrs. Wood and Co., New York; Mr. Hoor, Maidstone; Mr. Knox, Glasgow; Mr. Donkin, Hartlepool; Dr. Orton, Newcastle; Messrs. Wyman and Co., London; Mrs. Jeynes, Kingston-on-Thames; Messrs. Meouth and Hatcher, London; Mr. Hulme, Birmingham; Messrs. Broad and Sons, Hornsey; Mr. Scott, Manchester; Dr. M'Neill, Tiverton; Mr. Whall, Worksop; Mr. Cairns, Walworth; Dr. Renton; Dr. Swift, Ely; Mr. Saunder, Manchester; Dr. Thomas, Victoria-park; Mr. Carnie, Aberdeen; Dr. Herschell, London; Dr. Mundle, Hessle; Dr. Tucker, Leeds; Mr. W. W. Wallis, London; Dr. M'Kendrick, Glasgow; Dr. Gavin Milroy, Richmond; Mr. F. W. East, Clapton; Messrs. Summers and Co., Liverpool; Mr. Walther; Mr. Corbin, Guernsey; Surgeon-Major Hutcheson; Mr. Duggan; Mr. Cregeen; Mr. F. Fox; Dr. Hudson; Mr. J. H. Timins; L.R.C.P. Ed.; Nemo; J. P. L.; Academicus; H. M., Rotherham; J. G., Manchester; L.R.C.S.; A. G. C.; Duped; C. J.; J. C. W.; Amblyopia; Inquirer; &c., &c.

LETTERS, *each with enclosure*, are also acknowledged from—Rev. C. Feilding, Shrewsbury; Dr. Hafiz, Fakhar-ud-din, Lahore; Mr. Perry, Shrewsbury; Mr. Walton, Tipton; Mr. Bedford, London; Dr. Hicks, Bushey; Messrs. Lee and Nightingale, Liverpool; Mr. Thompson, London; Mr. Morris, Spalding; Mr. Hinken, Swansea; Dr. Wood, Burton-on-Trent; Mr. Norris, Weston-super-Mare; Miss Bingham, Grimsby; Mr. Gamgee, Birmingham; Mrs. Theobald, Leicester; Mr. Harrison, Sherburn; Dr. More, Rothwell; Mr. Salmon, London; Mr. Pentlam, Edinburgh; Mr. Beeman, Ashton; Mr. Turner, London; Mr. Gilkes, Hereford; Mr. Whiteley, Leeds; Messrs. Maclachlan and Co., Edinburgh; Messrs. Knight and Co., London; Dr. M'Lintock, Church Stretton; Mr. John Wood, London; Messrs. Burroughs and Co., London; Mr. Stewart, Nottingham; Messrs. Roberts and Co., London; Miss Jones, Codecote; Dr. Eagan, Stourbridge; Dr. Closs, Invercargell, New Zealand; Dr. Sheppard, Liverpool; Mr. Paterson, Moy; Messrs. Andrews and Son, Epsom; Mr. Clasher, New York; Mr. Phillips, Limehouse; Mr. Chesshire, Birmingham; Mr. Everton, Birmingham; Dr. Jones, Resolven; Messrs. Smith and Son, Dublin; Mr. Thompson, Gloucester; Mr. Dickinson, Leigh; Messrs. Schweitzer and Co., London; Mr. Williams, Sunderland; Mr. Birch, Oldham; Mr. Godfrey, Northampton; Dr. Thorrington, Panama; Dr. Skerritt, Bristol; Mr. Frampton, Weston-super-Mare; Mr. Ostell, Carlisle; Mr. Selby, London; Mr. Pring, Barnes; Messrs. Larmuth, Manchester; X. Y. Z.; Forceps, Dalton-le-Dale; Vade Mecum, Liverpool; A. W., Fulham; M.R.C.P.; A. B., Torquay; M.D., Bradford; Celeratis, Nottingham; Medicus, Nottingham; O. L., Kentish-town; W. E. S., Sheffield; H. M.; Renfrew; Medicus, Minchinhampton; T. M. T., Pontisbury; Alpha, London; J. M. D.; Delta, London; Principal, St. Leonards; G. P.; Medicus, Aberdeulyn; A. B., Bamber-bridge; G. B.; H. F. B.; H. A. M. D.; Ignoramus; &c., &c.

Englishman, South Hampstead Advertiser, Jersey Observer, Vaccination Inquirer, Italian Times, Echo, Egyptian Gazette, Cofee Public-house News, Reading Express, &c., have been received.

Medical Diary for the ensuing Week.

Monday, August 6.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

Tuesday, August 7.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

Wednesday, August 8.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.—Ophthalmic Operations on Tuesdays and Thursdays, at 1.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.—Skin Department: 1.45 P.M., and on Saturday at 9.15 A.M.

Thursday, August 9.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.
NORTH-WEST LONDON HOSPITAL.—Operations, 2½ P.M.

Friday, August 10.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.

Saturday, August 11.

KING'S COLLEGE HOSPITAL.—Operations, 1 P.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M.

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